

The Maine Economy: Shoring Up the Foundation

Presentation to:

The Jackson Laboratory
March 27, 2003

Laurie G. Lachance
State Economist

[NOTE: THE CHARTS FOLLOW THE TEXT]

We frequently talk about what's happening right now in Maine. We focus on cyclical changes and get caught up in recent events.

But today – I'd like to step back and focus on structural changes & the challenges they're creating for Maine's cities, towns & villages.

I am in no way, shape or form an expert on local government. But I have a **hypothesis** that Maine's towns & cities are under **tremendous pressure**

-Financial

-Political

-In some cases – **social/cultural**

and **certainly** – **economic**

And I believe that much of this strain has been brought on by some slow moving yet unquestionably powerful economic & demographic trends

These trends are **exerting** pressure on

-our **economy**

-our **communities**

-our **environment** &

-our **institutions**

and **stressing** our **systems** to a **breaking point**.

SLIDE 1 Ship-on ice

I want to start with this image some of you may recognize as the ship used by explorer Ernest Shackleton when he sailed to Antarctica: the Endurance.

The ship got trapped in these huge icebergs for a long time – Shackleton & his men tried to wait for the ice to break up but then something started happening.

SLIDE 2 Ship –tipping over

While not visible/noticeable on a daily basis the ice flows were exerting pressure on the ship

SLIDE 3 Ship-destroyed

Slowly, silently these forces – destroyed the ship forcing Shackleton and his men to completely re-think & re-engineer their mode of transport, their shelter, their lifeline.

This illustration is a bit extreme but shows how **pressure applied** for a long period of time **wreaks havoc** & can **completely change** our world & be **every** bit as **challenging** as one catastrophic event, yet **frequently** goes **unnoticed**.

Throughout our discussion today I challenge you to actively think about how these economic & demographic forces are affecting your municipality.

One last item before I launch into the trends.

I first want to share with you my 6 core beliefs or values so you'll know where I'm coming from.

1. I believe a tidal wave of change is upon us. The 6 critical trends that I'll share have huge implications that will touch every aspect of life in Maine & our communities.
 2. I believe knowledge is Power. If you arm Maine people with knowledge of the bigger situation, they are creative enough to find a path through the changes.
 3. I believe in survival of the Fittest but I've grown to believe the word fittest does not mean – strongest – biggest or –most powerful. Fittest means “Most able to adapt to change”.
 4. I believe innovation is critical to future prosperity. Michael Porter – who wrote “Competitive Advantage of Nations”, found that the single, most important determinant of a region's prosperity was its “capacity for innovation”.
 5. For me the words challenge and opportunity are pretty much interchangeable.
- SLIDE 4** 6. Last, but not least, I believe we ultimately share a vision for Maine that includes a high quality of life for all Maine people. Granted, high quality of life means different things to different people – but in no instance does it mean living in poverty or struggling for economic survival.

SLIDE 5 National Rank in Per Cap. Inc. 80-99

So with that I want to start with this image. Maine currently ranks **35th (2001)** in per capita income. If our **vision** for Maine is one of **prosperity**, we **must** strive to improve this

SLIDE 6 Percent of Jobs that pay a livable wage

Further – **Prosperity** alone is not an **end** all if **prosperity** is only **enjoyed** by a **few**.

Right now, **67%** of Maine jobs pay a **livable** wage. That has to change.

SLIDE 7 Multiple Job holding

And prosperity must be achieved by creating **quality jobs**

At the peak of 1990's expansion, **8.6%** of Mainers were working more than one job to make ends meet, **30%** above US average.

With that as a **backdrop** let's look at these 6 powerful forces

Critical Issue #1 – The **composition of ME's economic base** is **changing drastically**

SLIDE 8 Index ME & US Manuf Emp

First –Maine's transition from Industrial based economy to a Service based economy towards a Knowledge based economy is crystal clear & is causing tremendous economic disruption across Maine.

Manuf. Employment **peaked** in **1968** in ME & has since fallen by **30%**. **US Manuf.** employment peaked in **1979** has fallen by **20%**.

In 2002 we lost 6,600 manuf. jobs.

SLIDE 9 Chg Comp of Employment Base

2 megatrends of

1-Globalization

+

2-Technology

have dramatically changed job base, manuf. 22% in 1980, 12% 2000 & absolute decline

SLIDE 10 Quality of Jobs

Why is this a concern?

2 Big reasons

1- Avg. manuf job tends to be 60% higher paying **than nonmfg.**

Benefits can be 2-3X better

2 – **Secondly** – for those communities who are home for a manufacturing plant – **closure can decimate the economy & social fabric.**

Western Mtn counties **25-35%** & **Sagadahoc 55%** - extremely high concentration in manuf. – thus highly vulnerable.

SLIDE 11 Changing Comp in ME GSP

However – While manufacturing provides fewer jobs than in the past, as a producer of wealth this sector remains very important to Maine.

Despite sustained job losses Maine's industrial sector continues to contribute **17-19%** of GSP

Good news – Our manuf firms are more productive.

SLIDE 12 Productivity ME vs. US

In my paper “Me’s Investment Imperative” I quote **Paul Krugman** as saying “Productivity isn’t everything, but in the long run, it’s almost everything”. Well if that’s true – **Maine leaders** need to take a hard look at these 2 charts.

This shows that the average productivity of Maine’s workers has risen for 3 decades – **Good News**.

However, by year 2000 a typical Maine worker was only **80%** as productive as a typical US worker. Does this mean Maine people are not as capable or don’t work as hard?

Absolutely not

It does indicate that we have not invested as fully as other states in –the **education & training** of our workers, or in the **capital equipment** & technology that enables them to compete more effectively.

*Hence the name Investment Imperative

SLIDE 13 Productivity – Mfg/nonmfg

Further – I would note

Productivity of a typical manuf. worker in ME – has tripled in 30 years with a rapid acceleration since 1995.

Non manufacturing productivity remains stagnant.

By 2000 avg manuf. worker is 50% more productive than avg nonmanuf worker.

SLIDE 14 Decennial Population Increases

Critical Issue #2 ME’s population is growing **slowly**.

- For 130 years we’ve grown more slowly than the US as whole

- Our growth peaked 70s + 80s
- In **90's** – suffered 6 yrs out-migration.
 - **decline** in # babies born
 - overall growth 0.4% annually
- Forecast **0.4%** per yr. thru 2010
 - 0.6%** per yr. thru 2020

So what does slow population growth mean for Maine? And why is it a critical issue?

Slow pop. growth –putting squeeze on labor markets – strangling our ability to grow.

By year 2002

- **Labor** force participation rate near **70%**
- Statewide unemploy rate **4.4%**
- **Already** have a high multiple job holding rate of **8.6%** (US 5.6%)
- Some industries are screaming for labor

Yes tight labor markets have caused

- wages to rise
- benefits to be offered to workers who don't normally receive them
- increased flexibility

This is all good – but after **5 yrs.** of solid growth Maine’s per capita income is still in **35th** place

Now here’s the **challenge** that slow population growth creates.

Slow population growth means that the **vast majority** of today’s **work force** will be the **workforce next year** and **5** and **10** years hence.

If the **team** we’re **fielding** today puts us in **35th place** and we’re not expecting many new players, then we must **fundamentally** upgrade the **skill level** and **educational attainment** of every **work force** “team” member. **Our challenge** is to bring **every** Maine worker to his/her **highest potential contribution**

Maine Econ Growth Council found long term economic competitiveness of ME directly linked to educational attainment

SLIDE 15 With Additional Education

We know that with additional education unemployment drops & earnings rise

SLIDE 16 Avg Lifetime Earnings

We know avg lifetime earnings vary significantly by educational attainment.

SLIDE 17 Ed Attainment vs. Per Capita Income

We’re growing to understand that the states with a higher % of population with a Bachelors Degree have higher per capita income

So – if our vision for Maine is a high quality of life measured by rising income, it’s

Imperative that we **invest** in **Education**.

SLIDE 18 R&D

In Addition

In the 30 and 1000 study, Evan Richert found that to survive and prosper in knowledge based economy we must invest in **R&D**. ME currently invests at **1/5th** the **rate** of avg US **state**, **placing** us in bottom **5 states**. So...

- our **economic base** is changing **dramatically**
- our **population** is growing very **slowly**

The next 3 trends either are **currently** or **will** put **tremendous pressure** on the **costs municipalities** & the **State** must pay.

SLIDE 19 Pop. Pyramid

Fact #3 - Maine's pop. is growing **older**. Now there are tidal waves & then there are tidal waves. This is the TSUNAMI!

The Baby Boomers are driving this economy; Look how dramatically they alter our **make up** as they age.

In yr **2000** 175,000 seniors, 14% pop.

By **2020** 260,000 21% pop.

Put another way, over the next **2 decades** Maine's pop. gain will be **10%**

Maine's **senior** pop. will grow **50%**

The aging phenomenon is very pronounced in Maine because not only are baby boomers aging...

SLIDE 20 Brain Drain

But our young people are leaving

In both the 80s + 90s Maine suffered a loss of 20-29 yr olds

Loss in 90s nearly double 80s loss

- Frequently referred to as “brain drain”

- Presents a bit of a conundrum. **Young people** are attracted to **vibrant** economics & **vibrant economies** are built on the ideas & energy of **young workers**

SLIDE 21 Residual pop. Differences 80 to 2000 – by Regions

Further – youth out migration varies greatly by region

Losses in rim counties – the most severe in 80s + 90s

Central counties – significant losses

Coastal – no loss in 80s – some loss in 90s

SLIDE 22 Pop. Chg. by age cohort

A final look at aging – Points to huge Policy Issues.

From 1999-2025 – school age pop. – in decline

college age – in decline

young working age – in decline

65-74 pop. will double

75-84 pop. will grow by 55%

Think about the **pressure** an aging population places on

- Transportation System
- Healthcare System
- Housing
- Labor Supply
- Buying Patterns

How do we reshape/restructure our institutions and companies to serve an older population?

SLIDE 23 Dependency Ratio 1999

One of the major challenges that arise out of an aging population is who will pay for essential services and infrastructure?

Maine currently ranks **4th** oldest in the nation. As you look across ME counties – you see **wide range** of ages as well. This map shows each county's Dependency Ratio.

This is the # of persons under 18 and **over 65**, per 100 persons of working age.

The Dependency Ratio is a crude estimate of the **burden** on the working age population. It has implications, for our ability to pay for –schools – hospitals – social services.

Maine's Dependency Ratio is high and rising

One major challenge that arises is that

-Our institutions need to find more cost effective ways to deliver infrastructure and critical services. This may be the biggest challenge Maine faces

It is simply imperative to stretch our limited resources

Critical Issue #4 – Me's Pop. Growing Unevenly

SLIDE 24 Rate Pop. Chg – Map 90-2000

This map highlights

- Red hot coastal counties
- Stagnant central counties
- Declining Northern & Eastern counties

From 90-2000, 5 counties suffered losses

Wide disparity	York	13.5 %
	Aroos	– 15%

SLIDE 25 ME Cnty Pop. Forecast

Forecast – for this trend to continue; virtually all growth in Coastal Region

SLIDE 26 Community Infrastructure & Econ Development 97-02

To counter this trend the State is investing tremendous amounts of money in

- tourism
- infrastructure
- wastewater loans

- drinking water

57% of State econon devel \$ went to 8 rural counties, the rim counties plus Penob. and Waldo.

Critical Issue #5 – ME's Population is growing expensively

SLIDE 27 Pop. Chg 60-00 Center/Northern

In my lifetime, the percentage of State pop. living in more rural areas has grown from

36% in 1960 to

56% in 2000

This type of growth, SPRAWL has cost us dearly.

Evan Richert speaks of the 3 invoices we must pay because of sprawl

First is **FISCAL**

- **70-95** – there was a decrease in school age population, – yet we spent $\frac{3}{4}$ **billion** \$ on new school construction
- Construction of new & often redundant infrastructure cost the General Fund **\$50-75** mill. annually.

Second Invoice is Environmental

Non Point Source Pollution has become a huge threat

- storm water run off
- nutrient loading in ponds

Now, with one of highest commuting populations – vastly increasing auto emissions

Third Invoice, - Loss of character of communities.

Impacting - Farms

- Wildlife Habitat

- Schools closing

* **Eroding** our **Civic Capital** - **Who will lead?**

The challenges that our pattern of development have caused are many

SLIDE 28 Change in School Enrollment

And costs of SPRAWL to municipalities are astounding. Let's look at school enrollment trends as school budgets are a huge portion of municipal costs.

1970 – 95 – Enrollment dropped **8% Statewide**

But in **Service Centers** – dropped **25%**

Growth Towns up **33%**

Balance dropped **25%**

Thus, experience varies greatly

SLIDE 29 School Enroll by town

And look what happens at munic level! **25%** declines in Lewiston & Auburn, **105-125%** increases in Sabattus & Poland

SLIDE 30 Me. Public School Staff

And SPRAWL is not the only thing causing educational costs to spiral between 1980-2002

classroom teachers rose \approx **16%**

all other staff rose \approx **150%**

SLIDE 31 Persons of color

6th critical issue is Maine's homogeneity. In yr 2000 – ME **96.5%** Caucasian, made us **#1** in nation. By comparison only **69%** of **US pop.** is **non-Hispanic whites**

Challenge this creates is we must dig even deeper to be innovative and remember innovative capacity is a critical determinant of prosperity

It's harder to think of new approaches when **96.5%** of population has a similar heritage, similar life experiences

As critical as this issue is for ME, **our recent experience** in Lewiston shows us – there is **nothing** simple about **change** & moving towards a more heterogeneous population

How is Maine doing in the area of innovation?

SLIDE 32 National Rank Innovative Assets (composite index of 10 tech related indicators)

Well, we currently rank **46th** in innovation assets. We can see the challenge here

Remember, as % of GSP spent on R&D – we rank **44th**.

SLIDE 33 % Busi New Products

% Businesses with New Products – has stagnated in recent years

If Michael Porter is right, that Innovative Capacity is the most critical determinant of a region's prosperity, then **we must** find ways to create that capacity.

So - Let's summarize so far

#1 Me's economic base is undergoing a dramatic transformation

- absolutely decimating the tax base & **economic base** of certain towns
- Remaining mills demand tax breaks

#2 Me's population is growing slowly

- strangling growth
- making investment in education **imperative**

#3 Me's pop. growing older

- threatens to impose **huge costs** on towns & **state**
- healthcare
- transportation
- housing
- Raises question of who will pay for infrastructure & services?

#4 ME's population is growing unevenly

- Diverting development resources toward restoration

#5 Me's Population is growing expensively

Adding huge costs to state & municipal govts.

- Education
- Transportation
- Waste water treatment
- Waste removal

#6 Me's Population is extremely homogeneous

- **Inhibits growth & innovation**

Now let's add **one more**

Pressure Point

SLIDE 34 Cartoon Budget

Municipal Govt's partner – State Govt is in a **budget crisis**

State Govt had a budget shortfall of \$240 mill and 8 months to solve, then it was 44 million more with only 6 months to solve and now, a looming \$1 billion shortfall for next biennium will make it extremely difficult for the State to help ease pressures municipalities are feeling

SLIDE 35 Volatility

So how did the State get in this bind? Part of reason – the Revenue Stream is highly volatile

Huge swings can occur

- Very rapidly
- With little warning

SLIDE 36 Genl Fund Revs 2001

Here's some insight into why we experience huge swings

47% GF Revs come from Income Tax – yet 1/3 derived from top 2% (10,000) taxpayers

33% come from Sales Tax – Bulk from sales of autos & bldg supplies

SLIDE 37 General Fund Expenditures FY 2001

This is where the State spends its money

35% - Education

29% - Human Services

Thus, 64%, or nearly 2/3rds of expenditures go to very high priority items

This is why cutting state spending is so extremely difficult

SLIDE 38 S&L Tax Burden

And raising more revenue is equally difficult as Maine's tax burden is already among the highest in the nation

I believe ME must invest to keep productivity up & to compete

Problem is – **Globalization** extends tremendous pressure on regions with high cost structures

SLIDE 39 Maine Cost of Doing Business

FOLKS – We’ve got a problem with our cost of doing business in ME which is **11% pts** above US average.

We’ve got to find a way to **reduce costs** and **continue investment** in **high priority** public goods & services

- Education
- Colleges
- R & D
- Technology

SLIDE 40 Tax Mix

And we need to use **caution** as **to how we do it**

- The recent call for property tax reform may signal this tax is at its natural limit

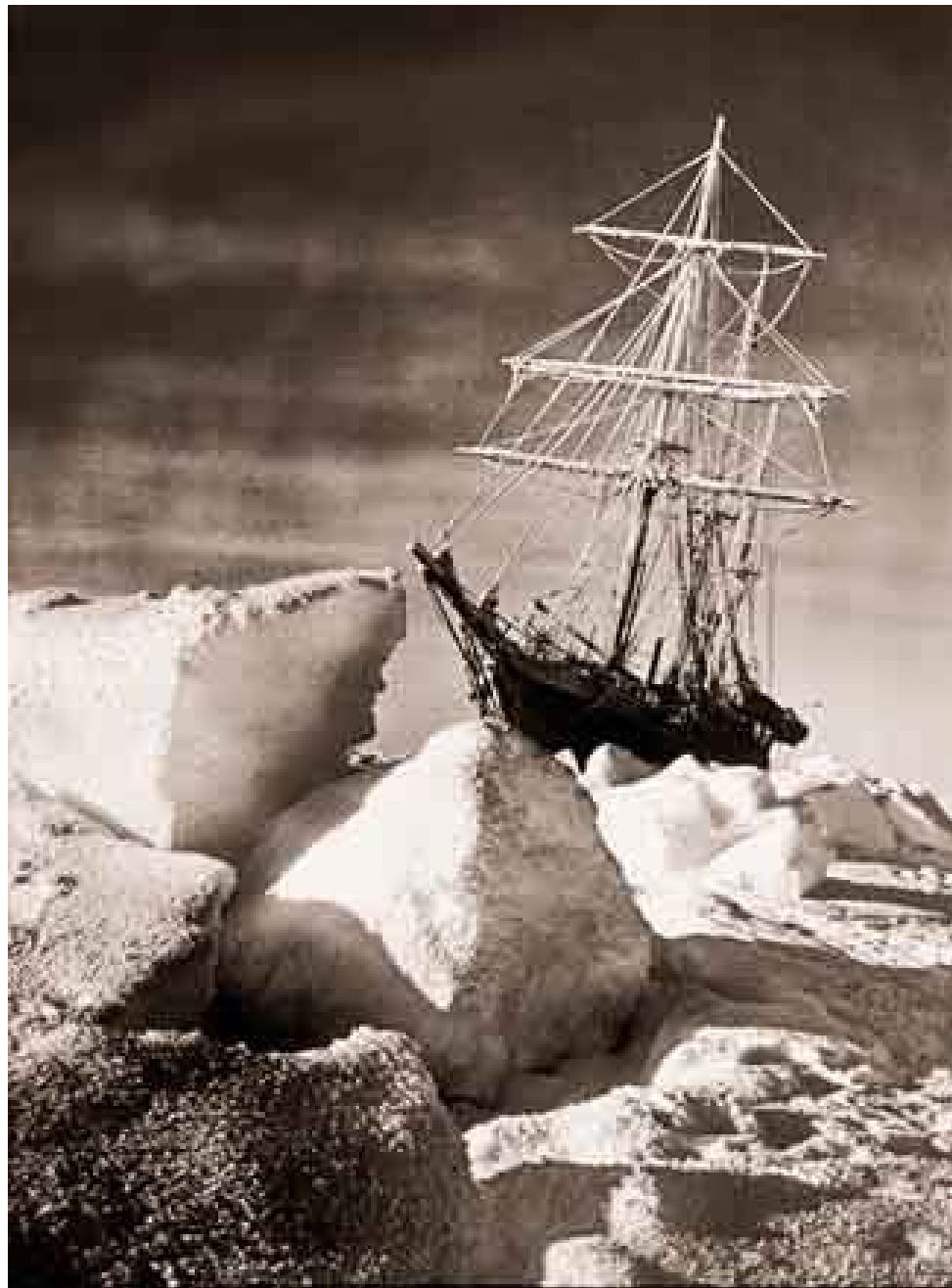
SLIDE 41 State & Munic. Expenditures

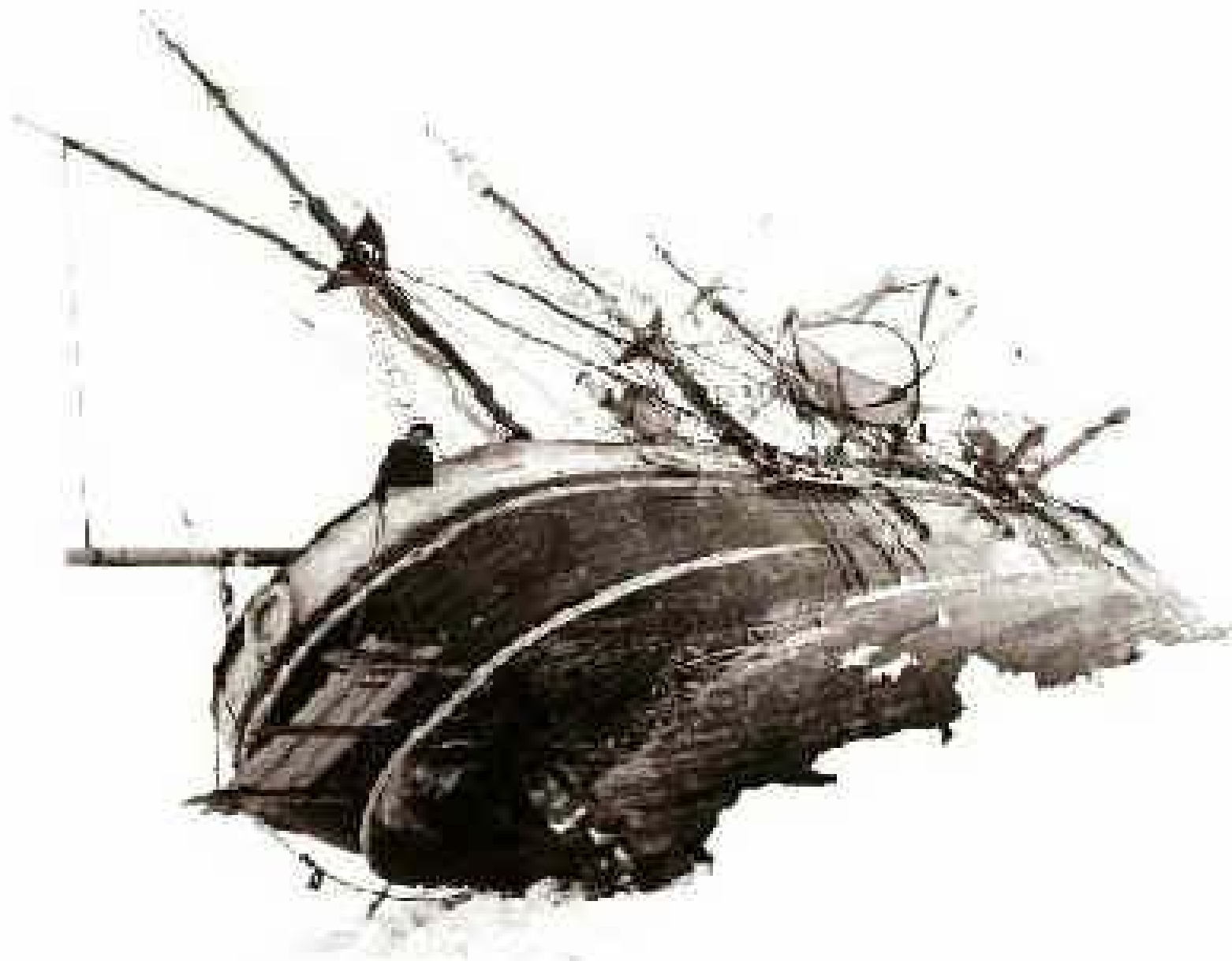
And we’ve got to **work** **together**

Interesting to note that real expenditures in State & local govt have grown at exactly the same pace between 1976 and 2001.

SLIDE 42 CAT

We can only wish that these many challenges were as easy to solve as the mystery of “where’s the bird.”



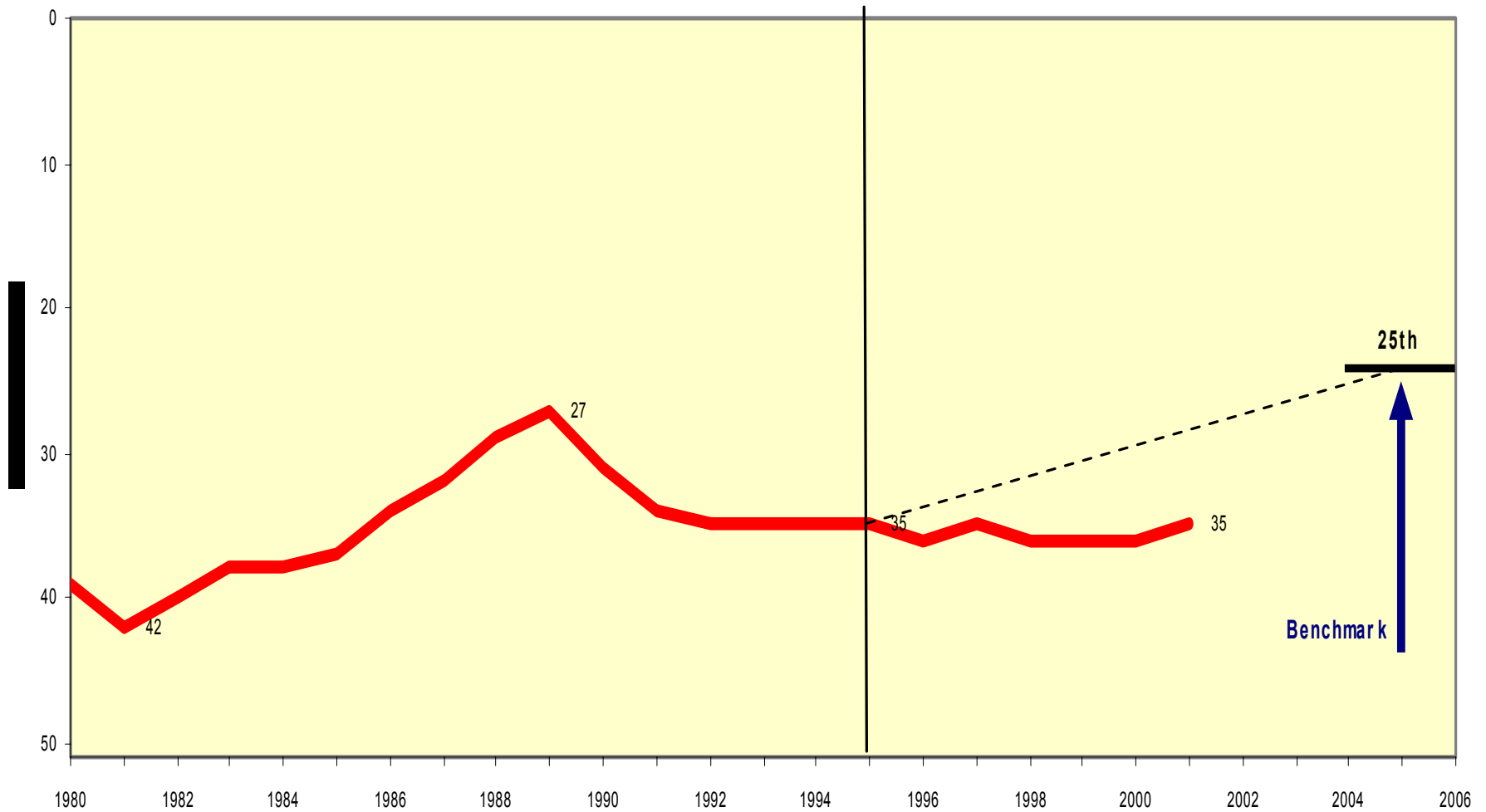




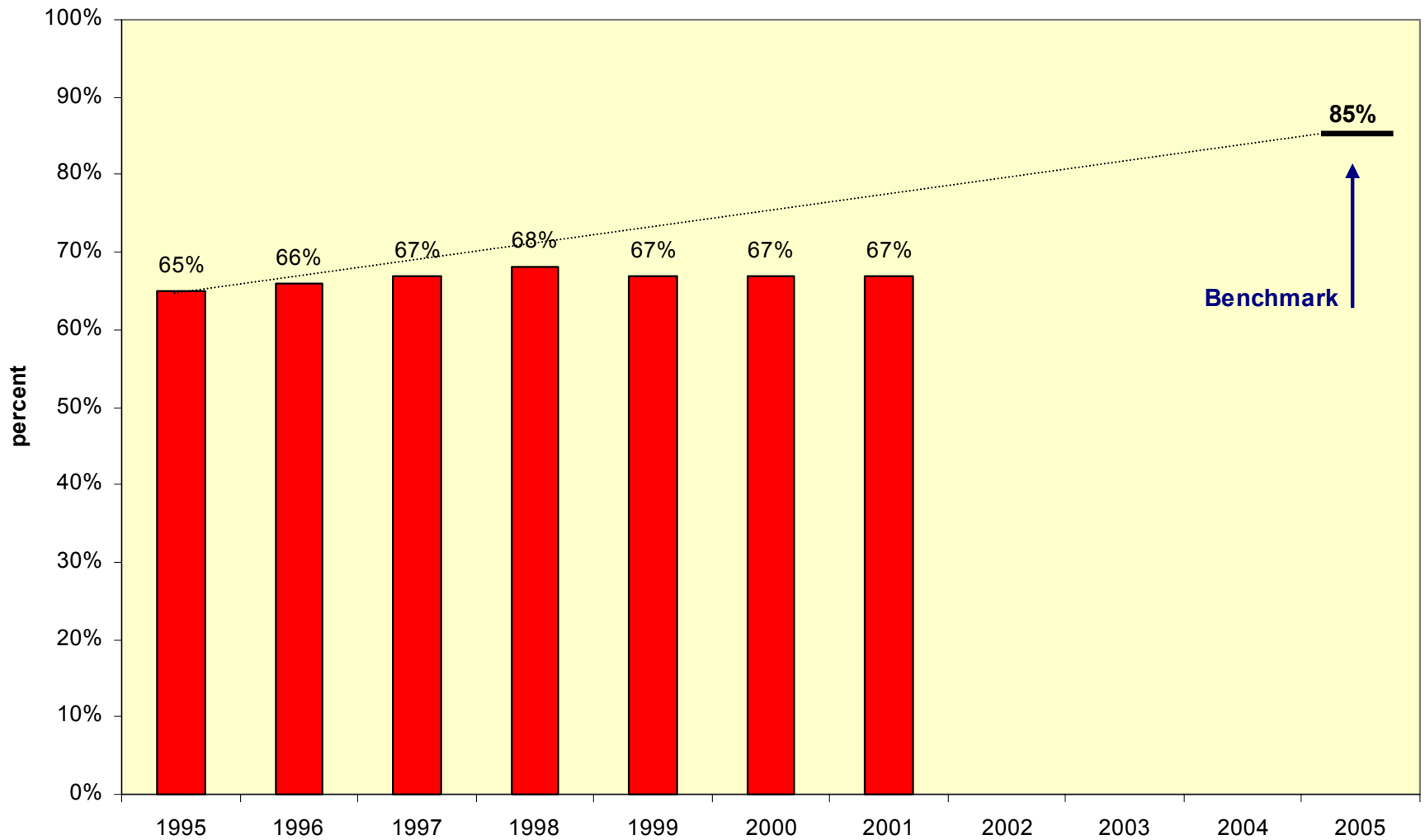
VISION

OUR VISION IS A HIGH
QUALITY OF LIFE FOR ALL
MAINE CITIZENS

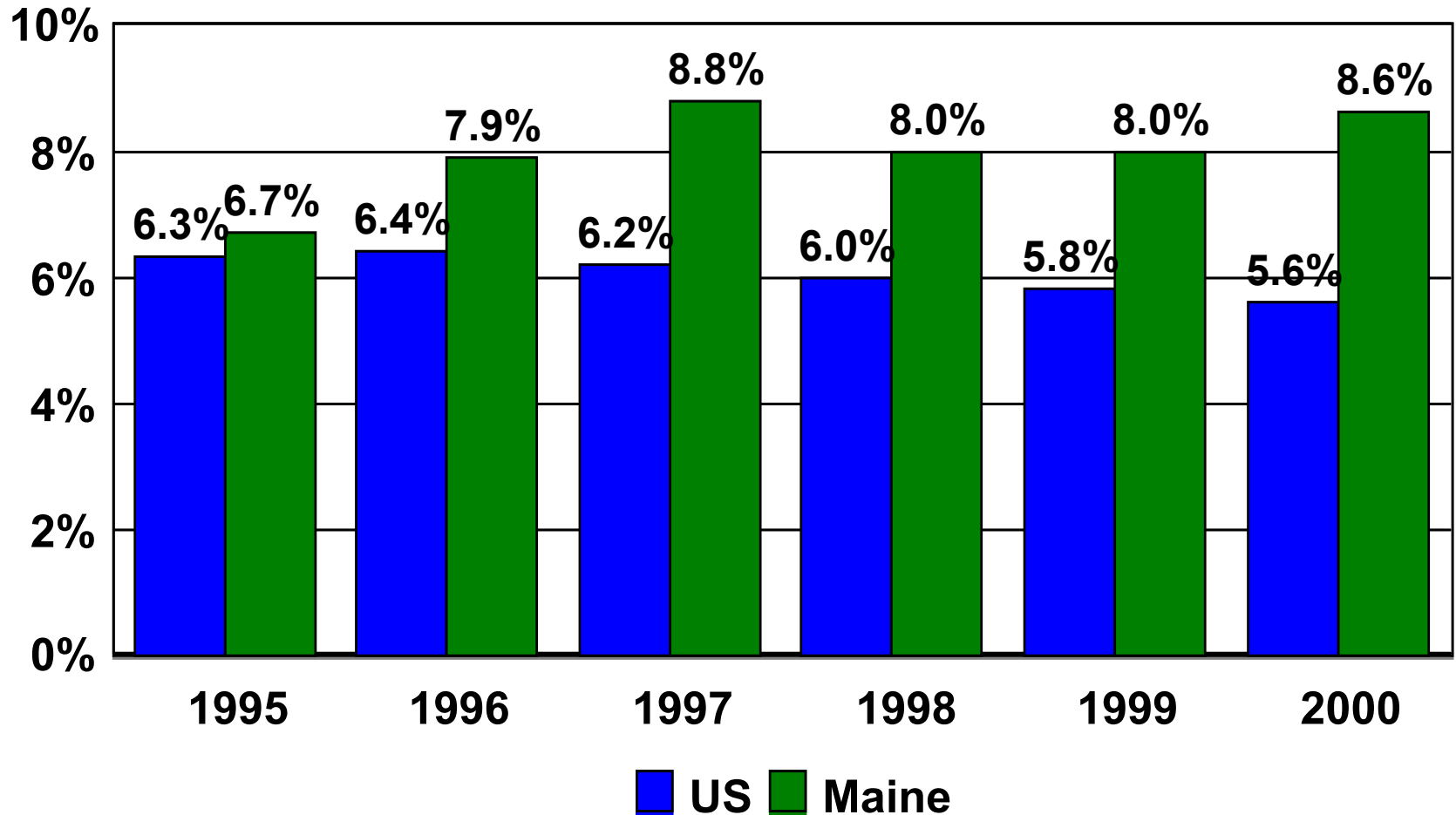
National Rank on Per Capita Income, 1980- 2001



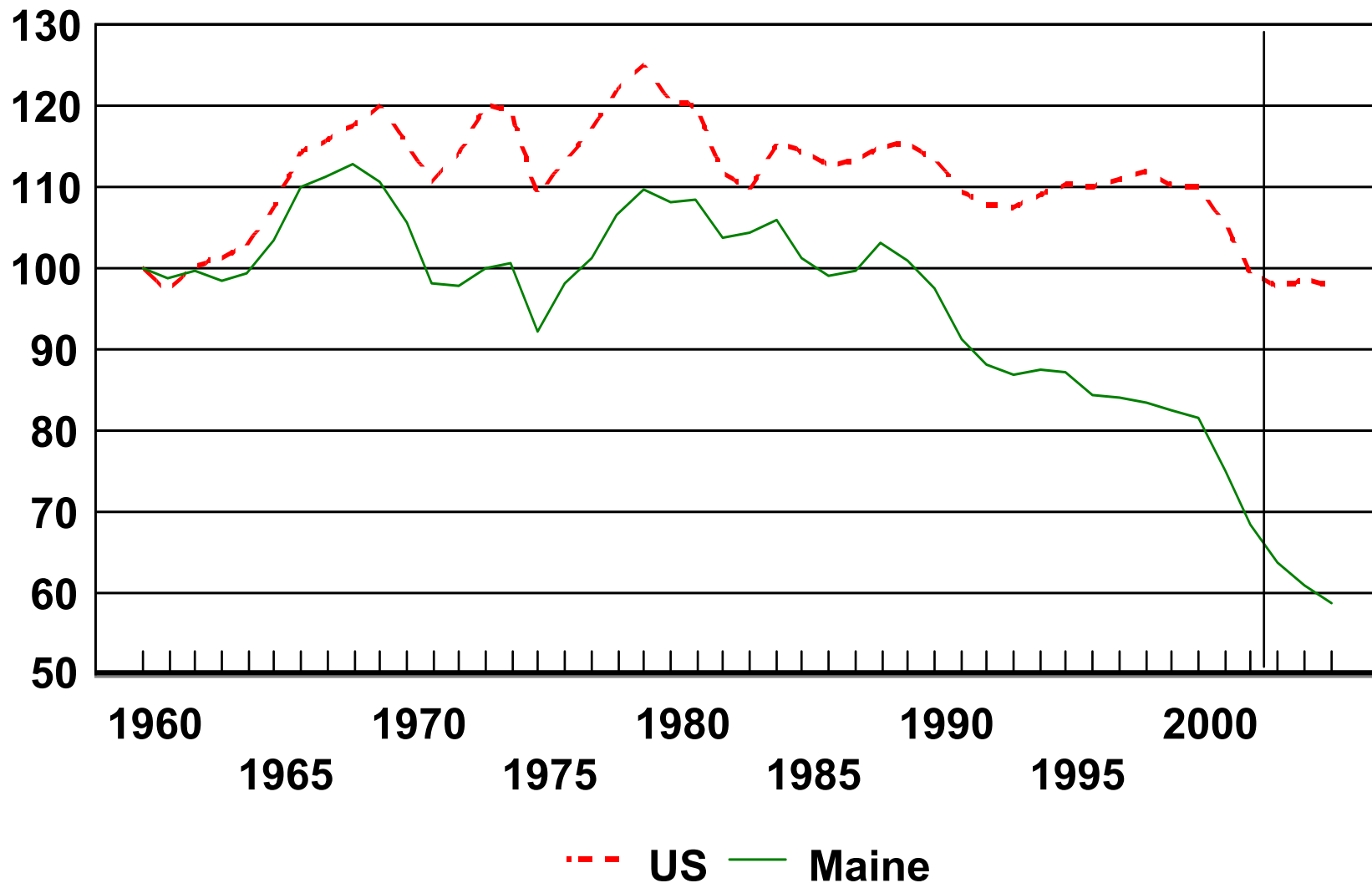
Percent of Maine Jobs that Pay a Livable Wage, 1995-2001



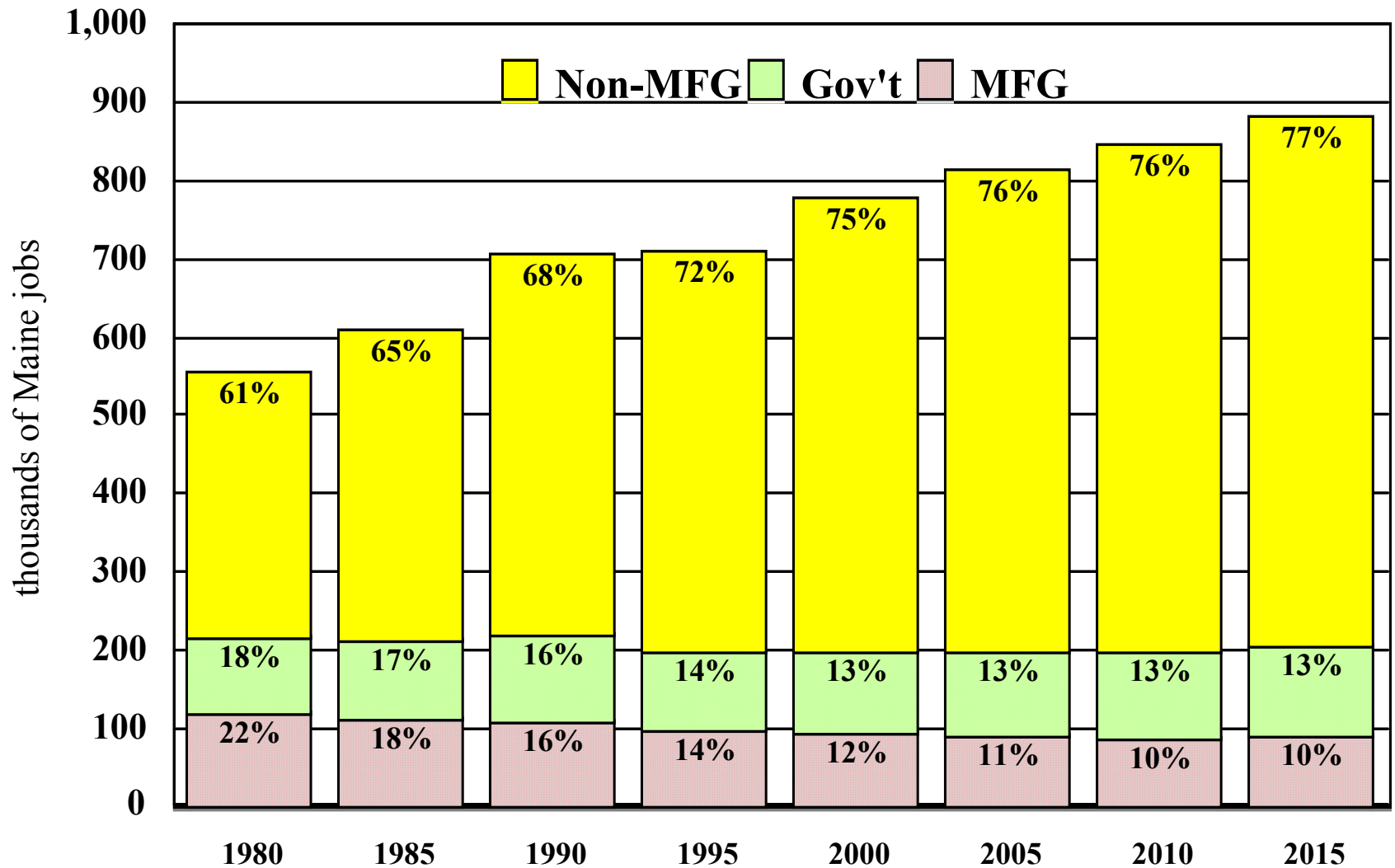
Multiple Job Holding Rates; US & Maine



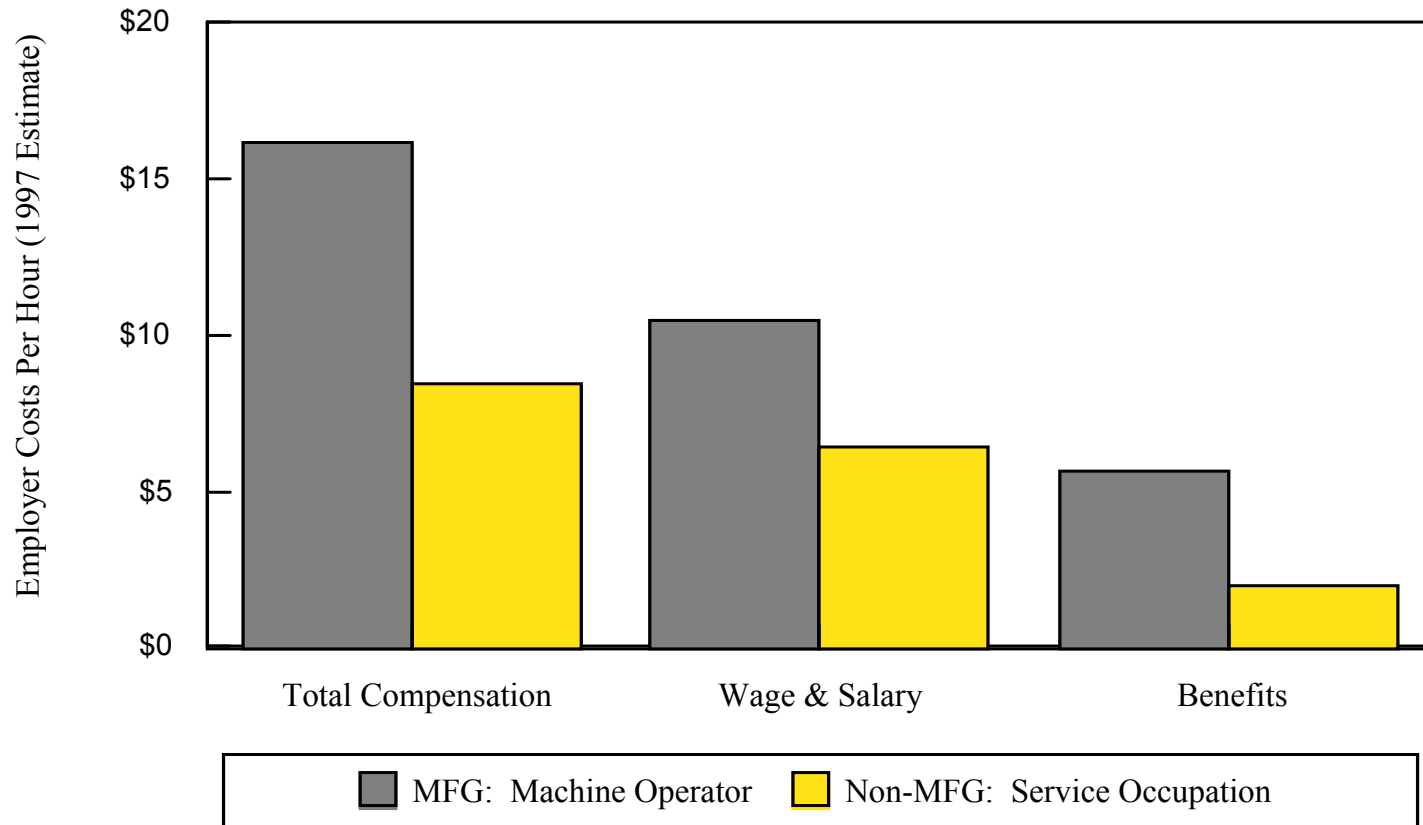
Index of Maine & US Manufacturing Employment (1960=100)



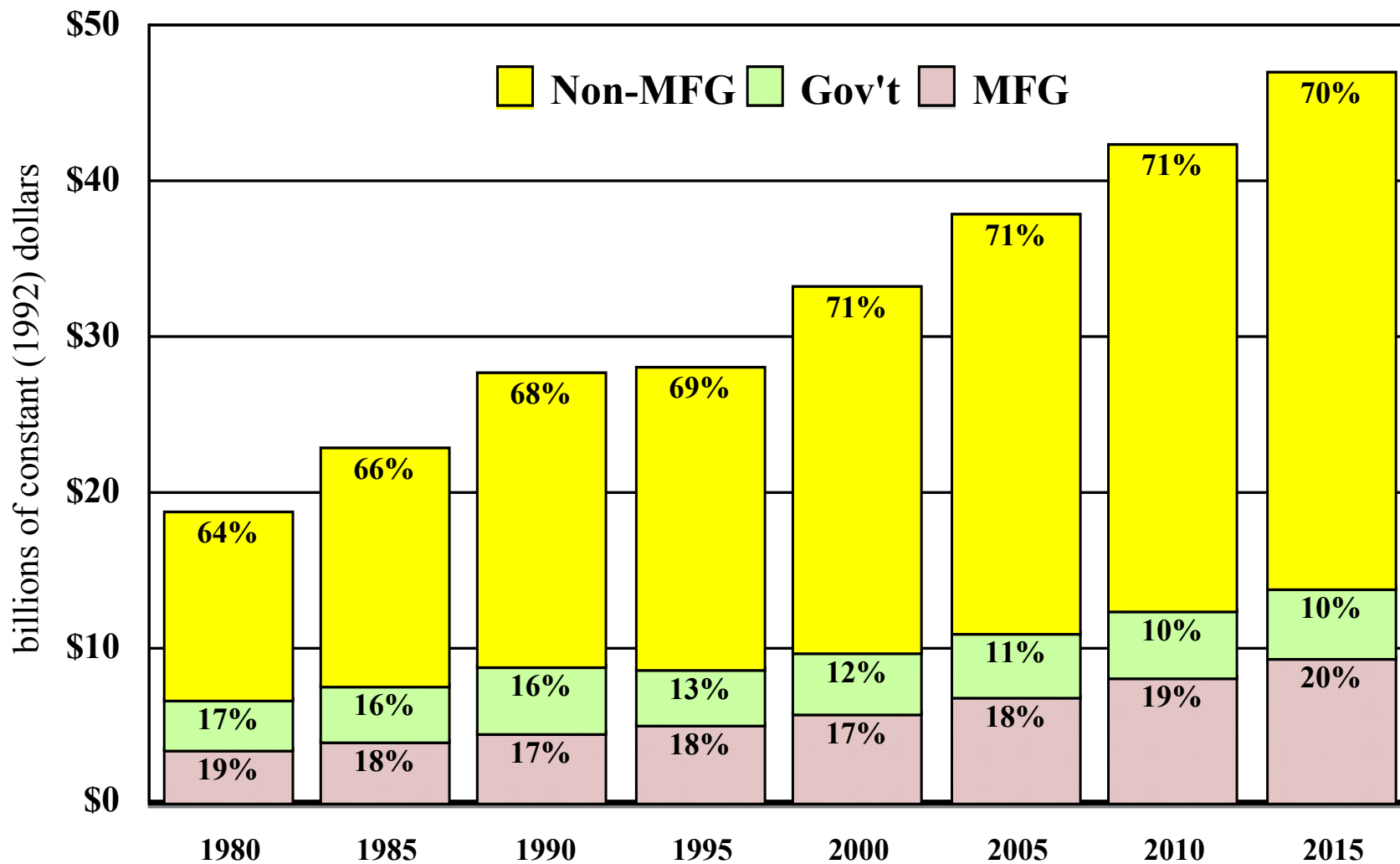
Changing Composition of Maine's Employment (Maine History & Forecast: 1980 - 2015)



Quality of U.S. Jobs: MFG vs. NON-MFG (Measured in Total Compensation, Wages, & Benefits)

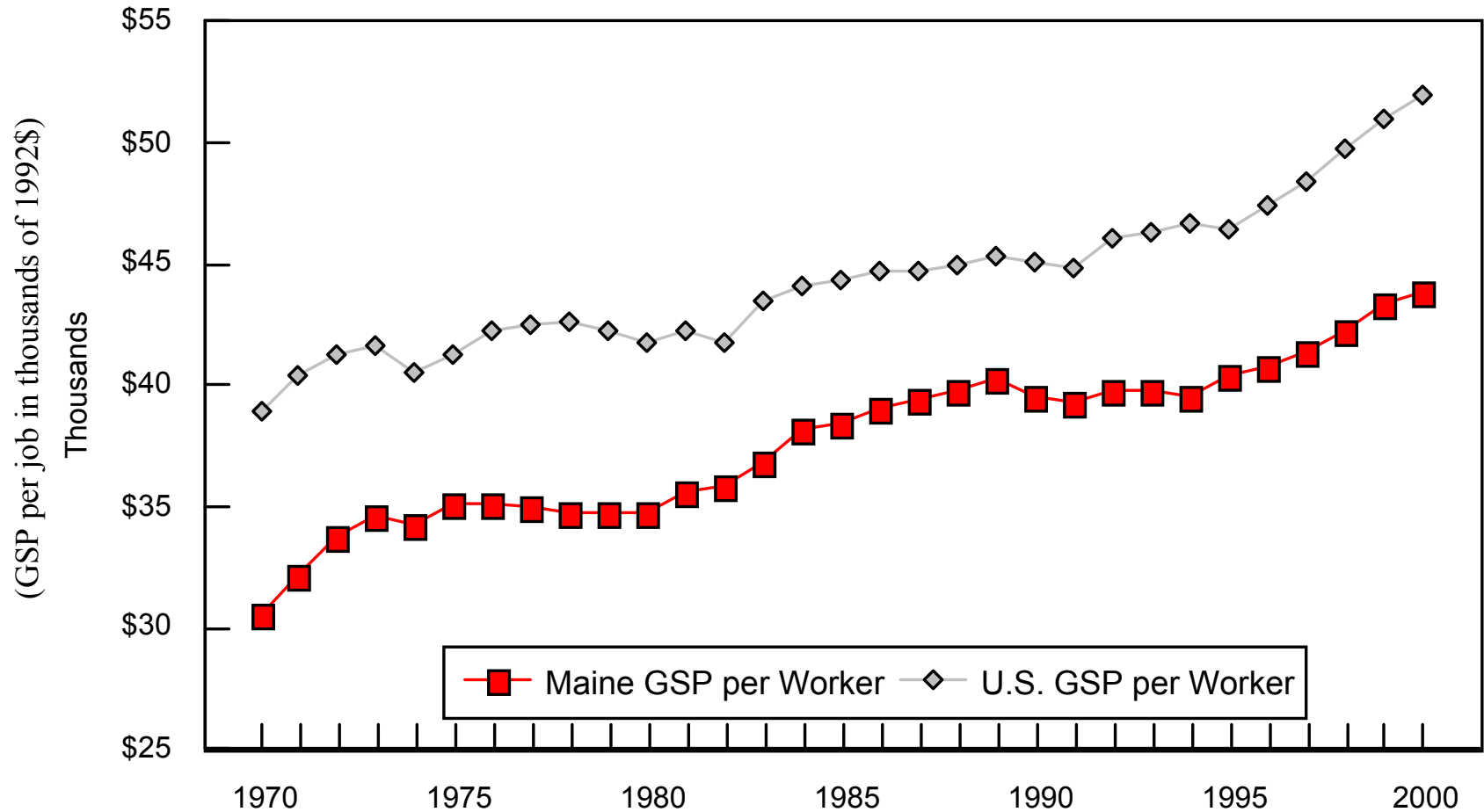


Changing Composition of Maine's Gross State Product (Maine History & Forecast: 1980 - 2015)



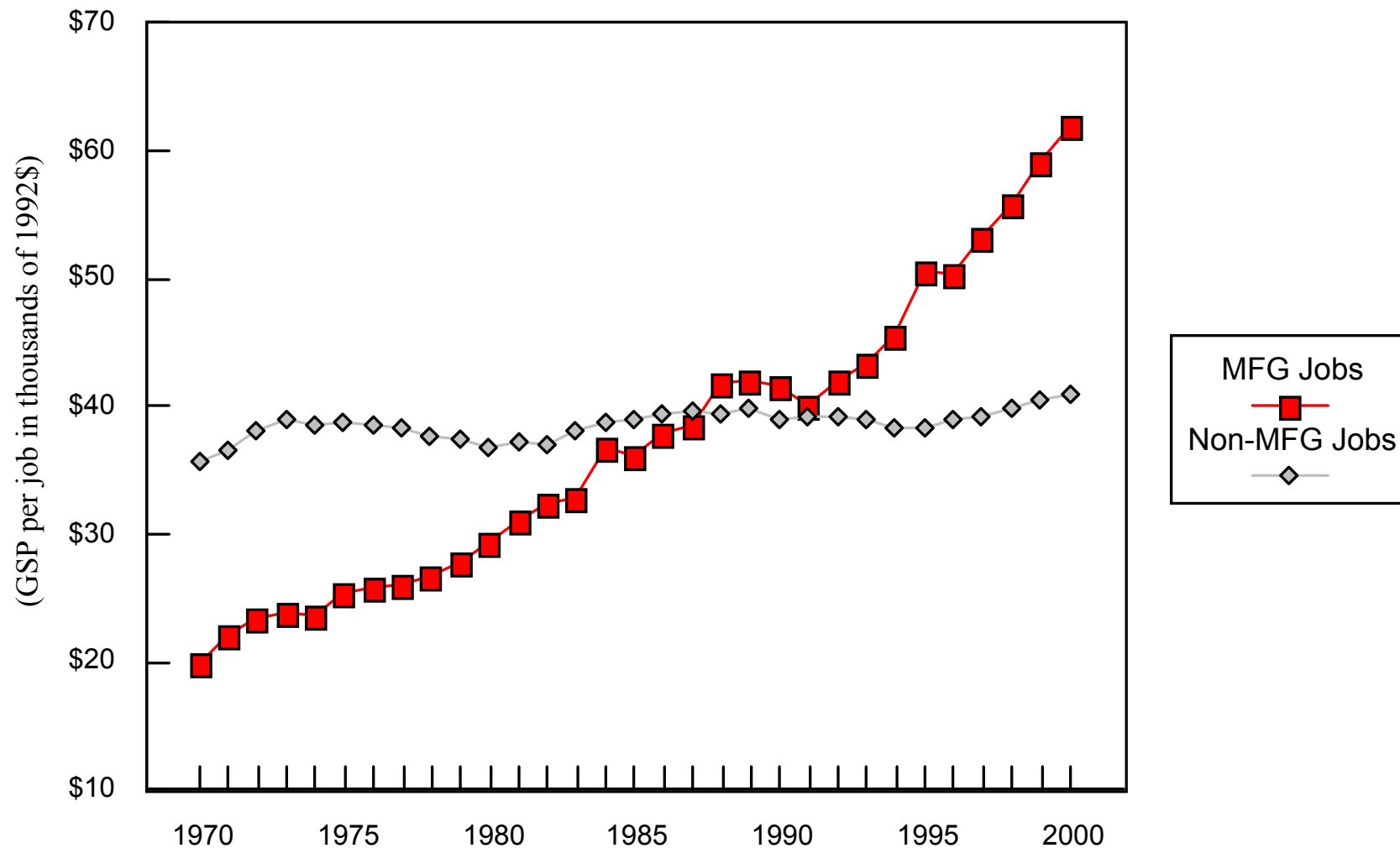
Productivity: REAL GSP per WORKER (Maine vs. U.S.)

(economic contribution per job in thousands of dollars of real GSP per year)

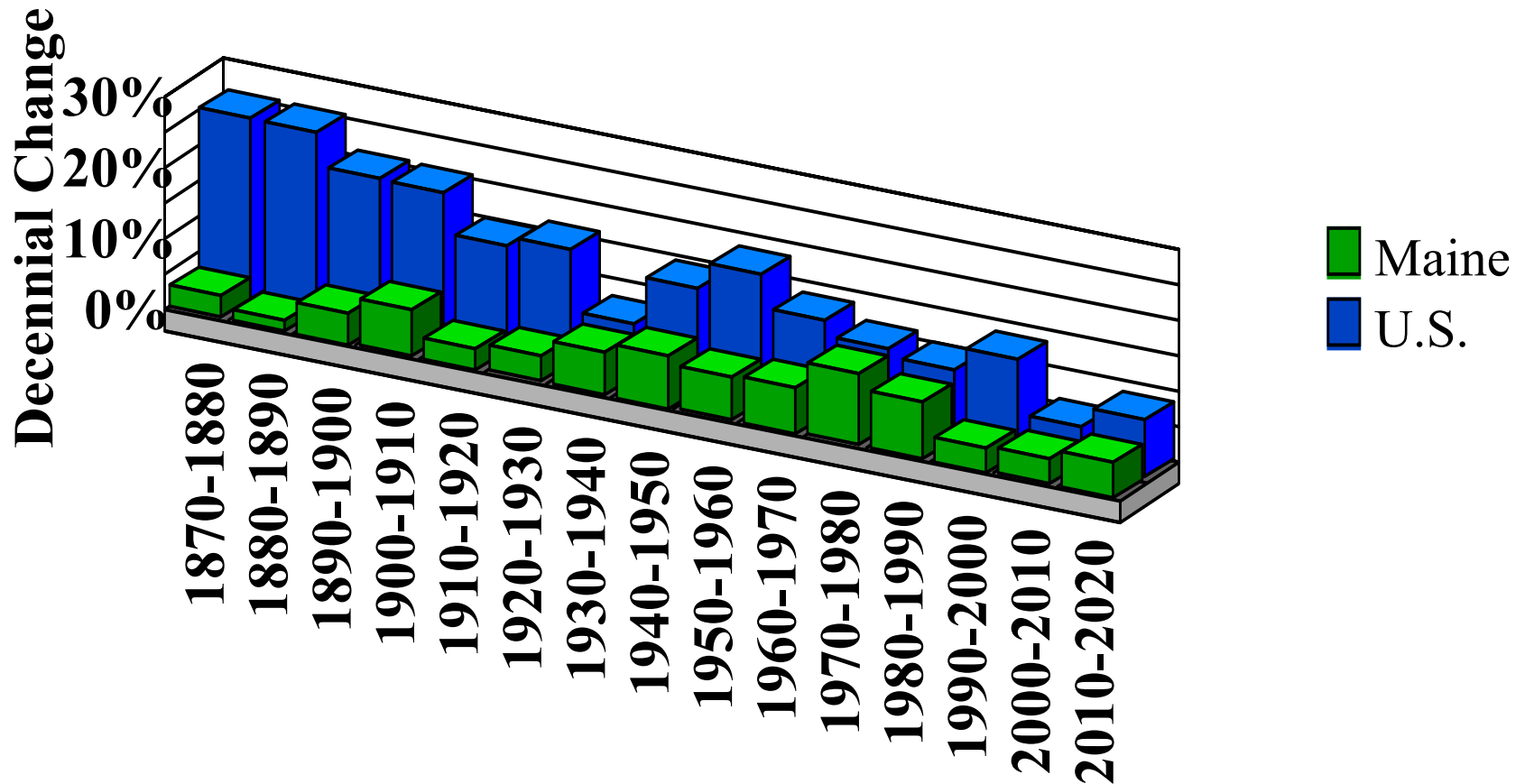


Value of each MFG & Non-MFG job to Maine's Economy

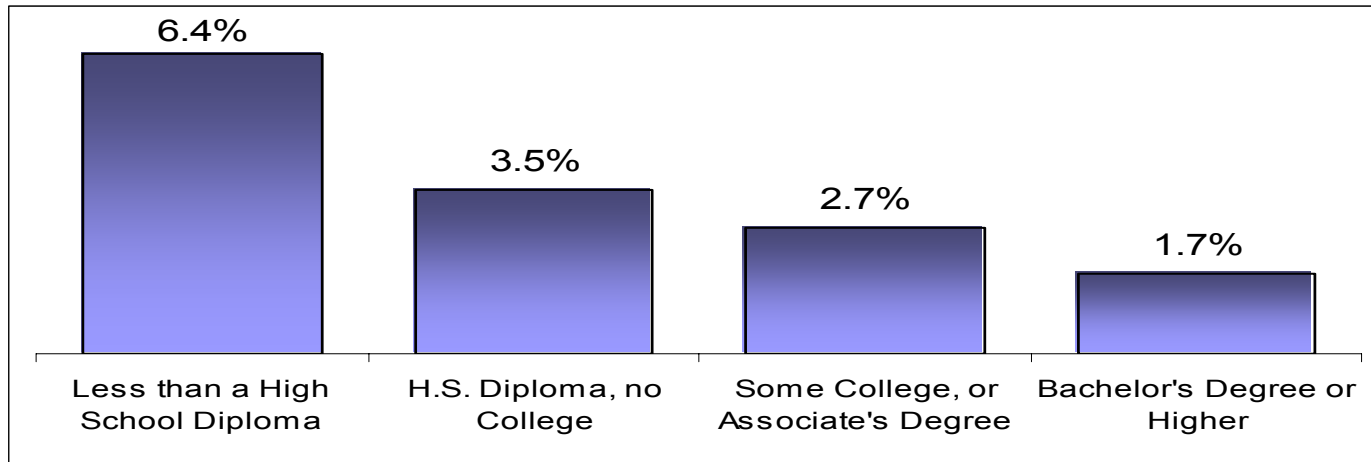
(direct economic contribution per job in thousands of dollars of real GSP per year)



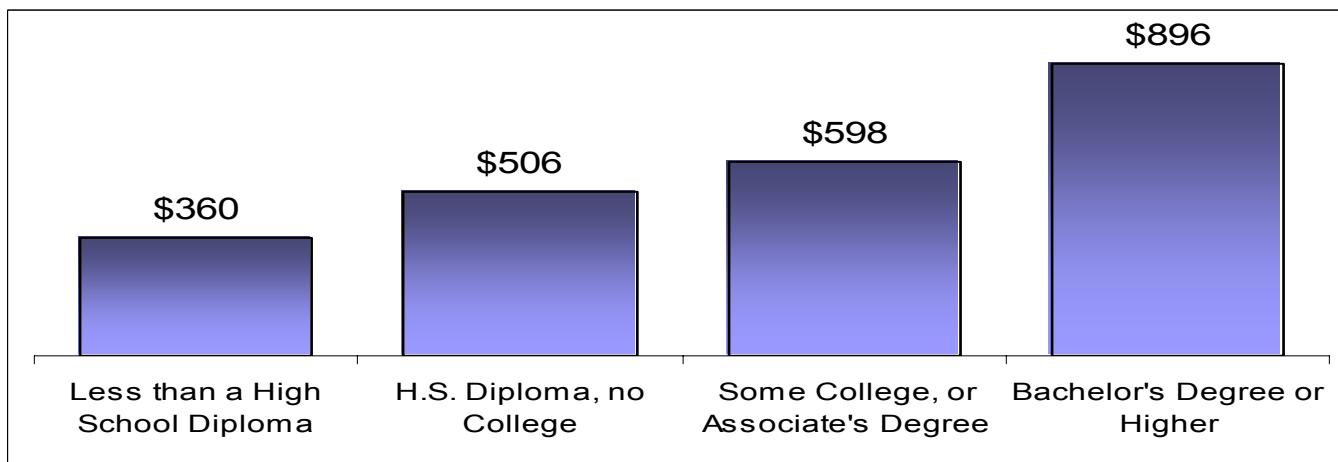
Actual and Projected Decennial Population Increases Maine and U.S. 1870 to 2020



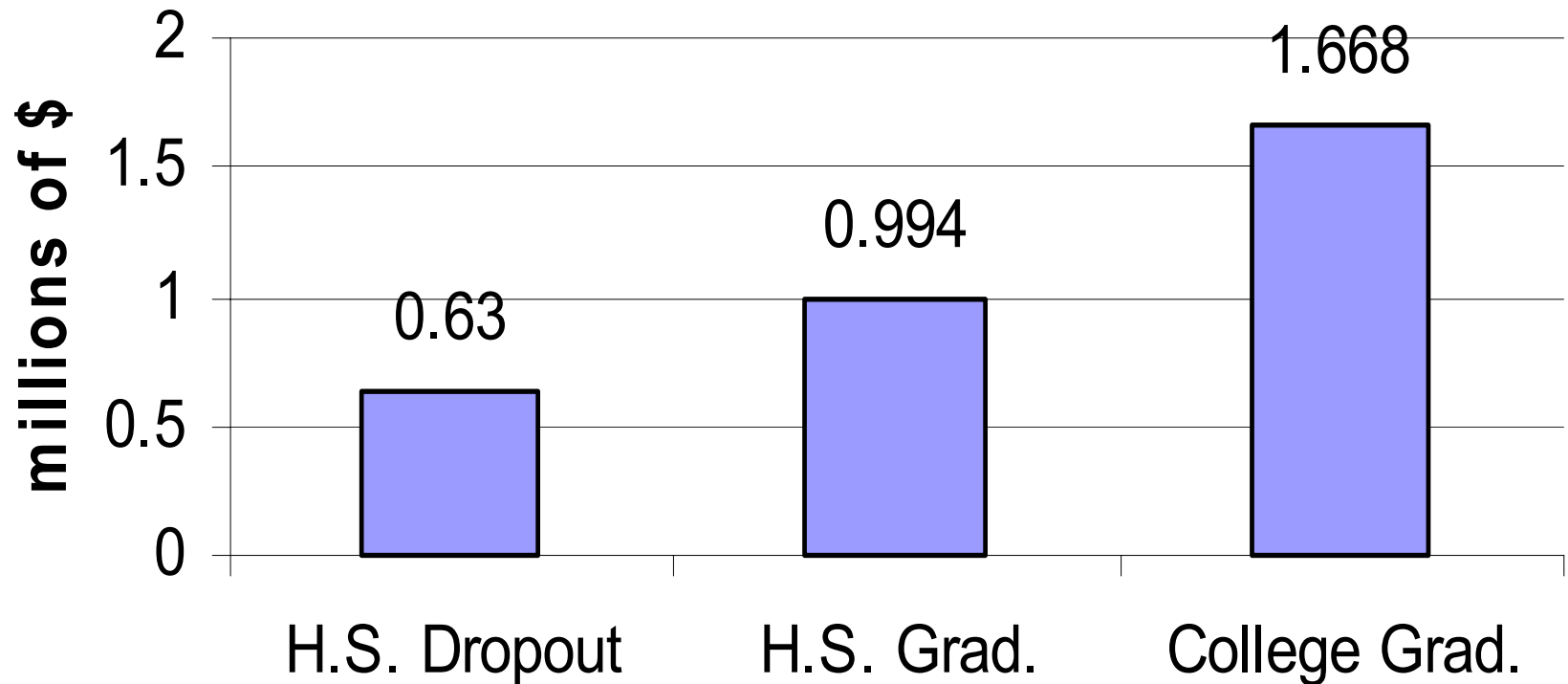
With Additional Education - Unemployment Drops...



...and Earnings Rise

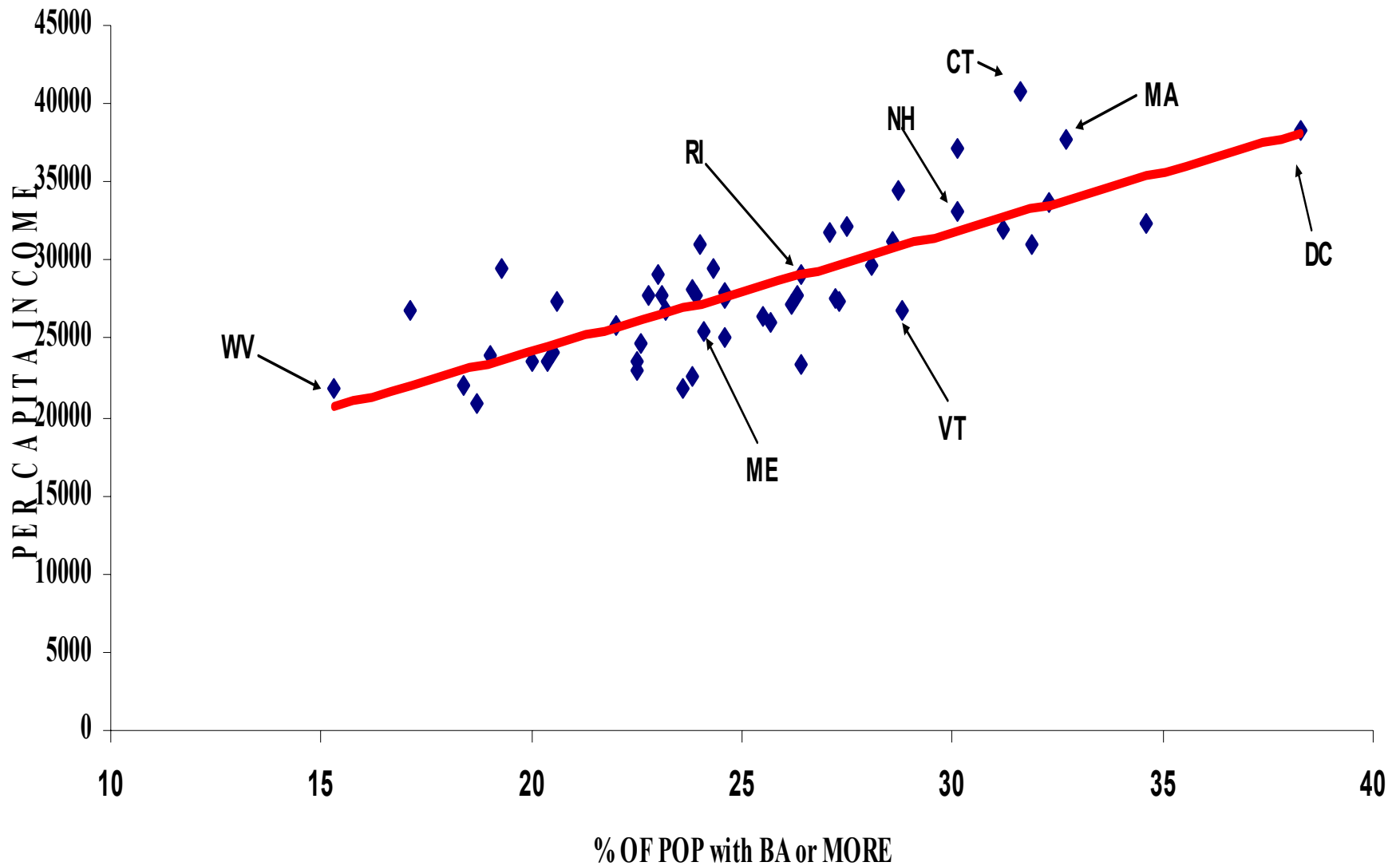


US Avg. Lifetime Earnings by Education Level in 2001 \$

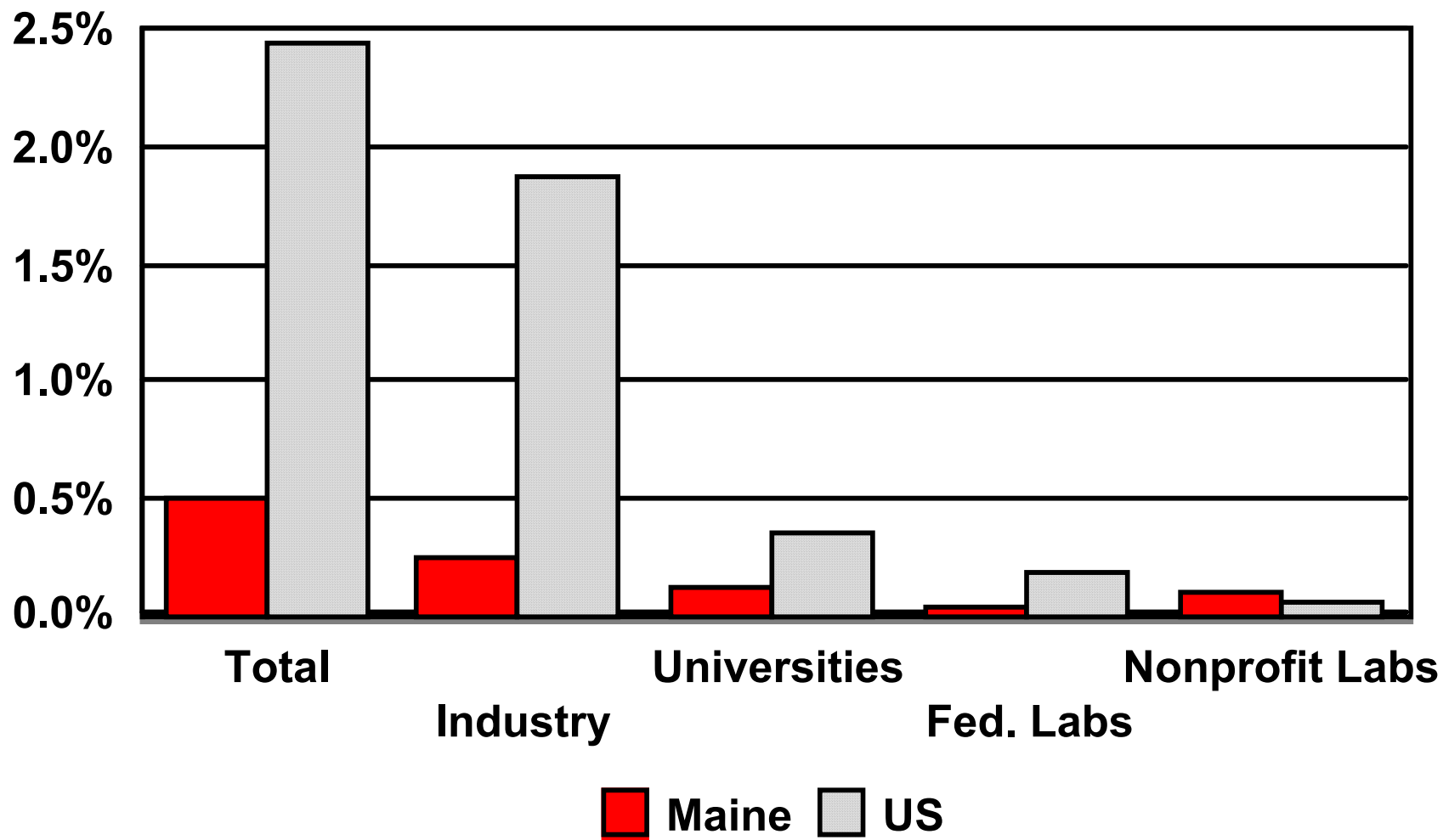


Source: www.chicagojobs.org/earnings.html - from US DOL

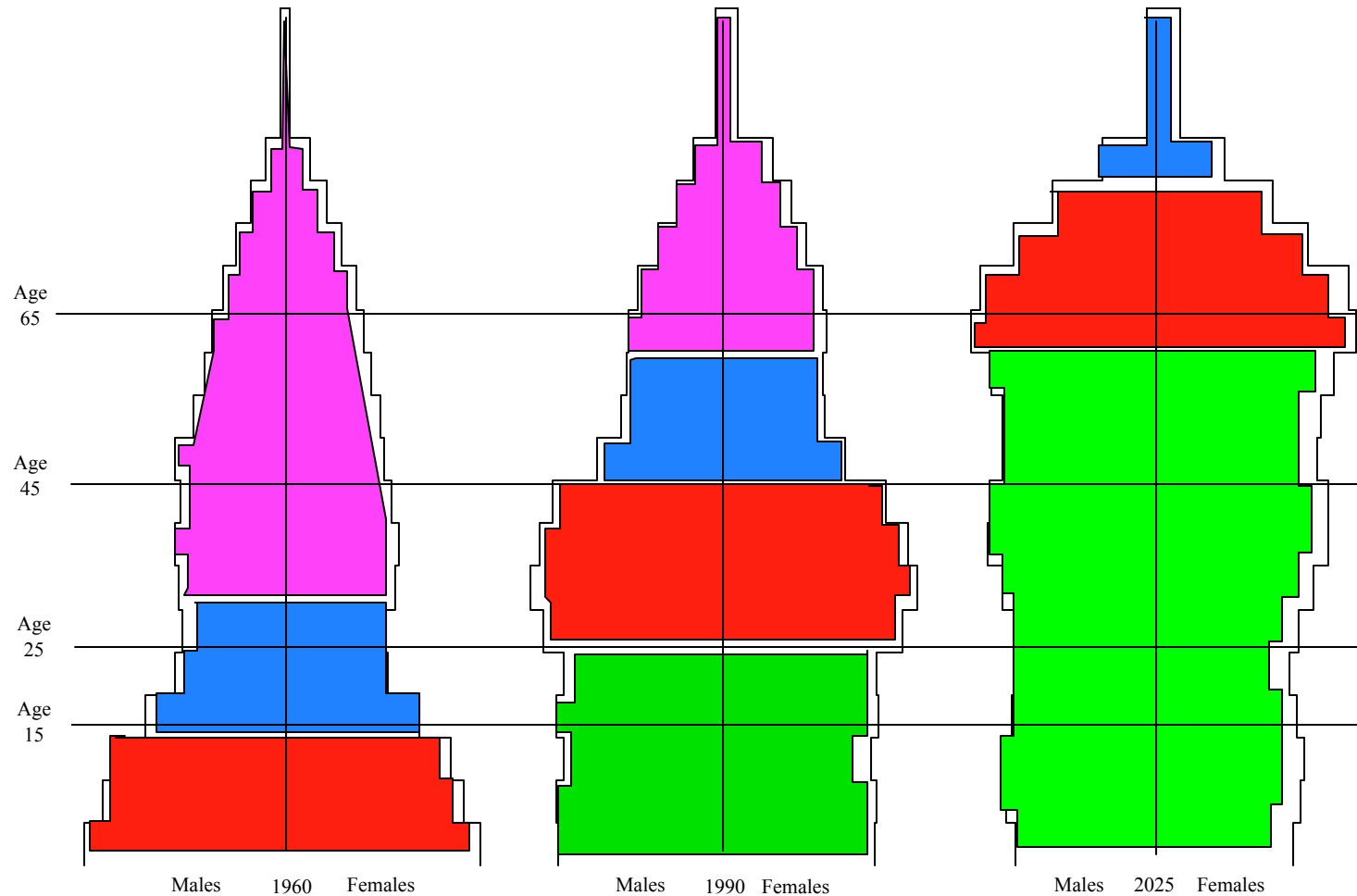
EDUCATIONAL ATTAINMENT AND PER CAPITA INCOME 2000



Percent of Gross State Product Spent on R&D; 1998



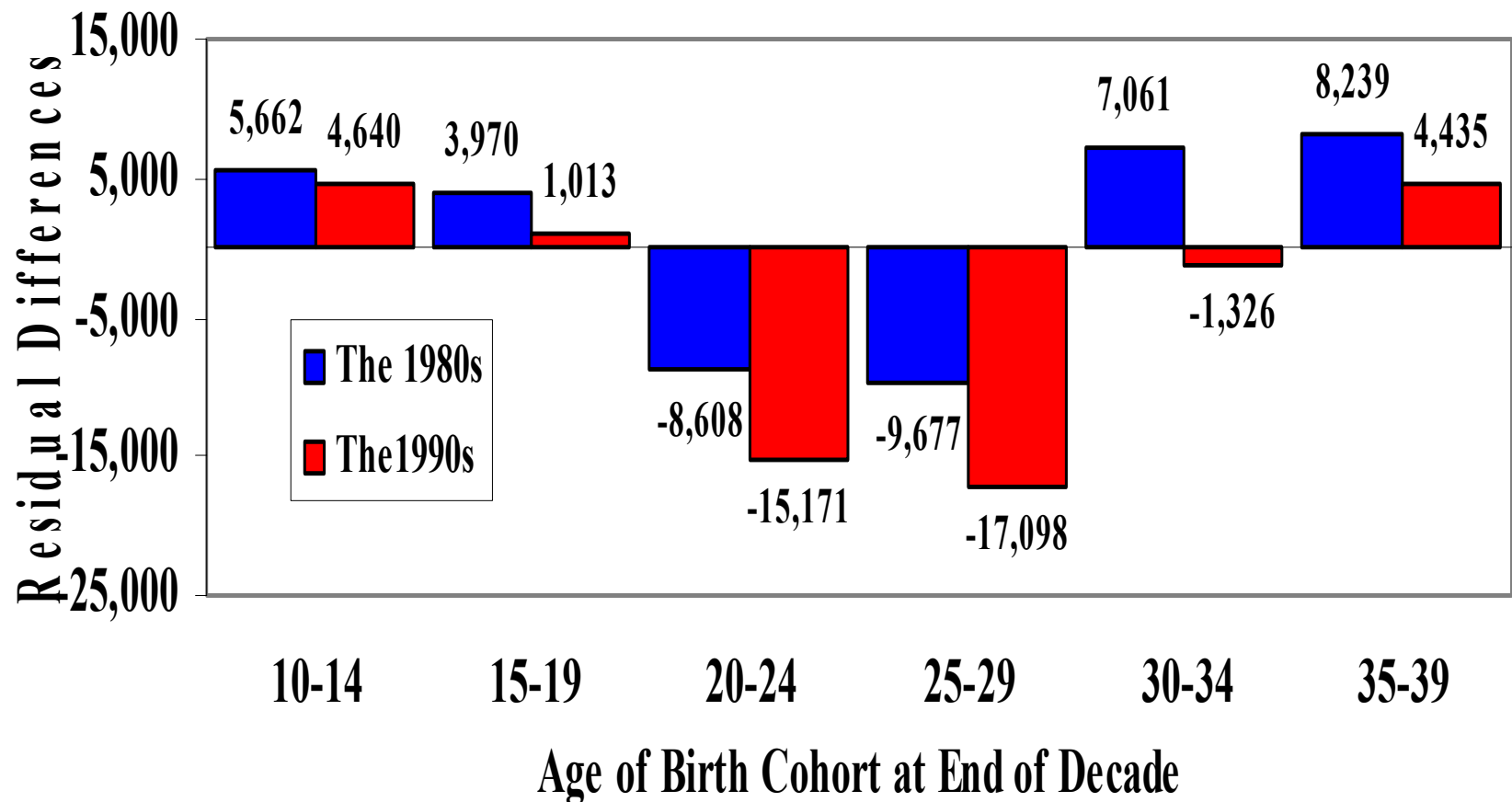
Age and Sex Composition of the Maine Population 1960, 1990 and 2025



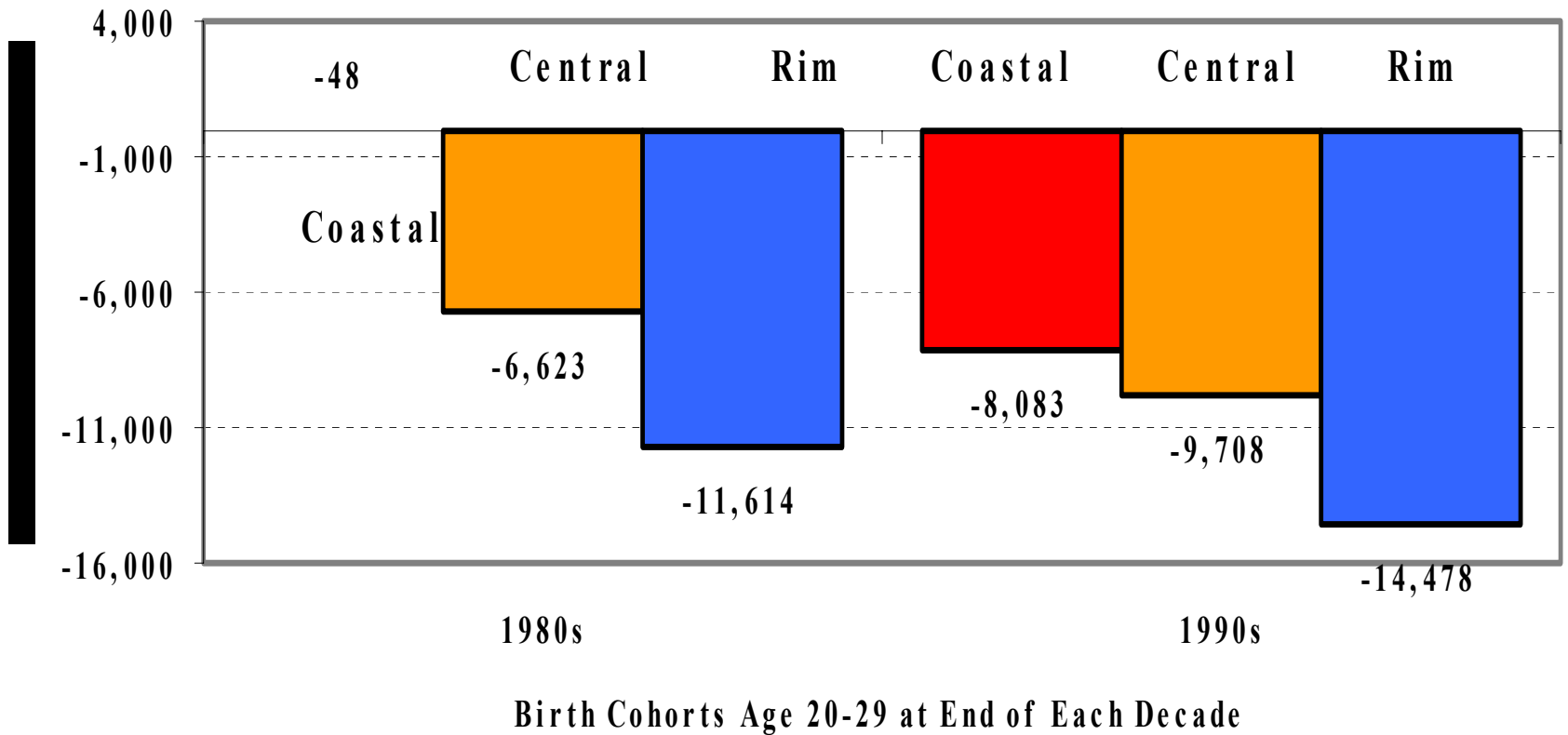
Data Source: U.S. Census Bureau, 1960 and 1990 Decennial Censuses and Projection Issued October 1996

Born before Great Depression
 Born during Great Depression & WWII
 Born during Post-WWII Baby Boom
 Born after Post-WWII Baby Boom

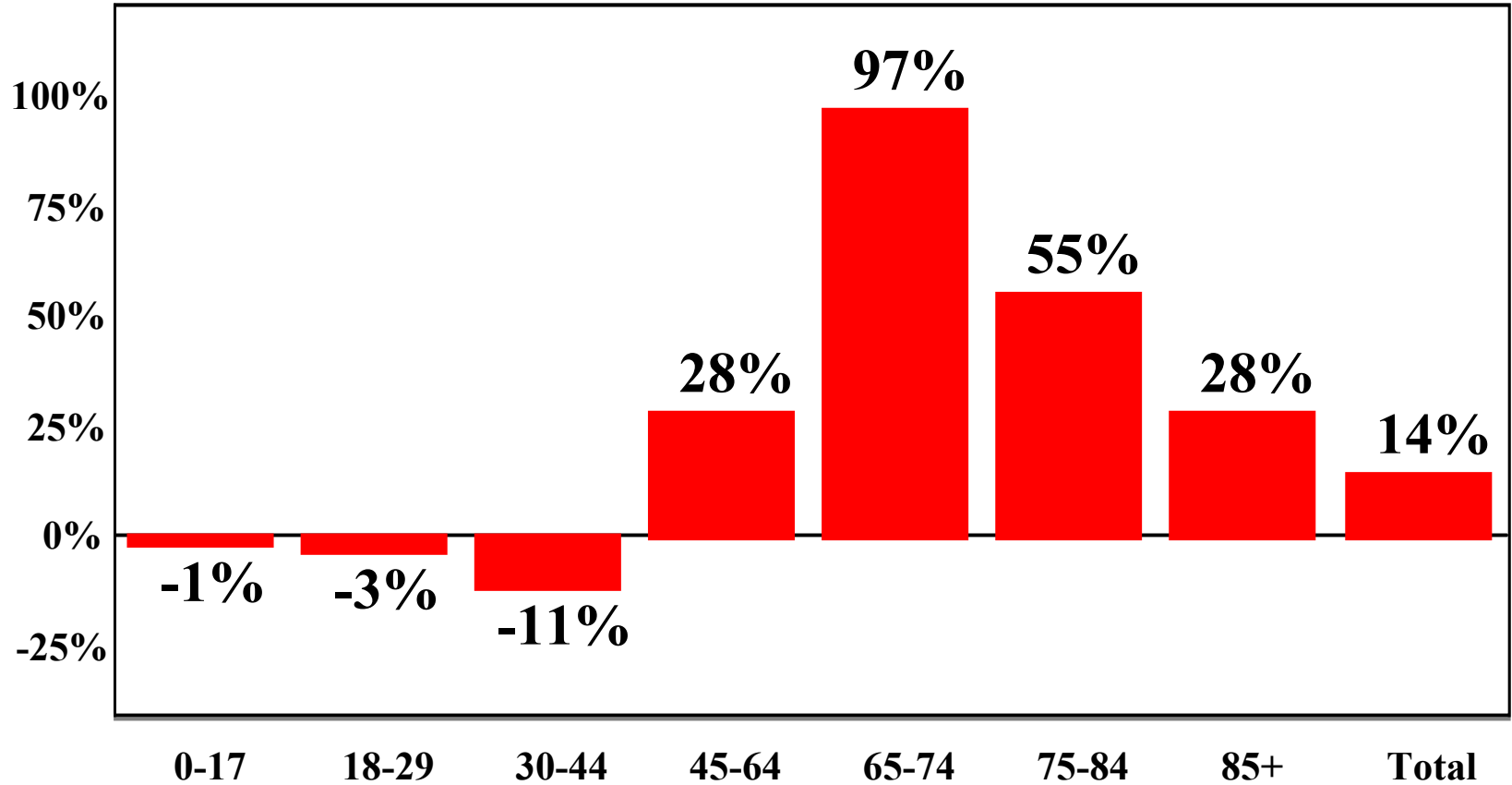
Residual Population Differences between 1980 and 2000 in Selected Maine Birth Cohorts

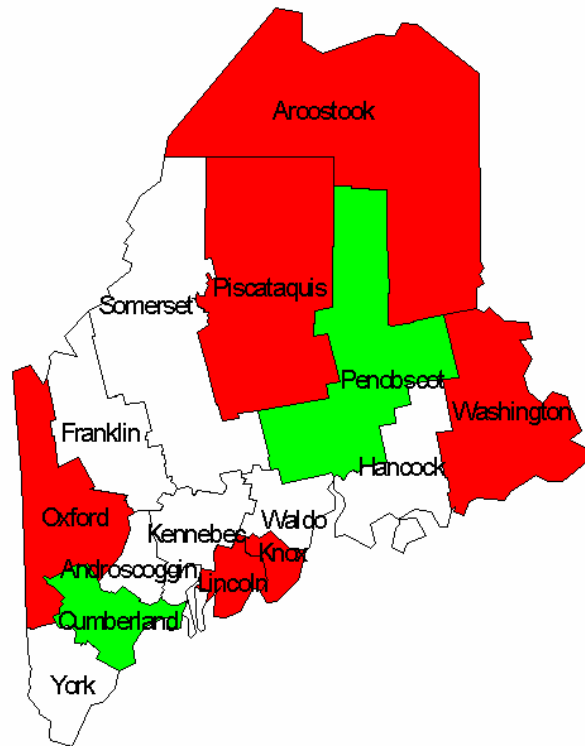


Residual Population Differences between 1980 and 2000 in Selected Birth Cohorts in Three Regions of Maine

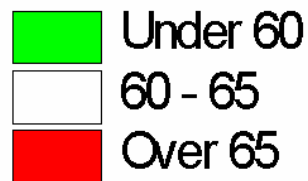


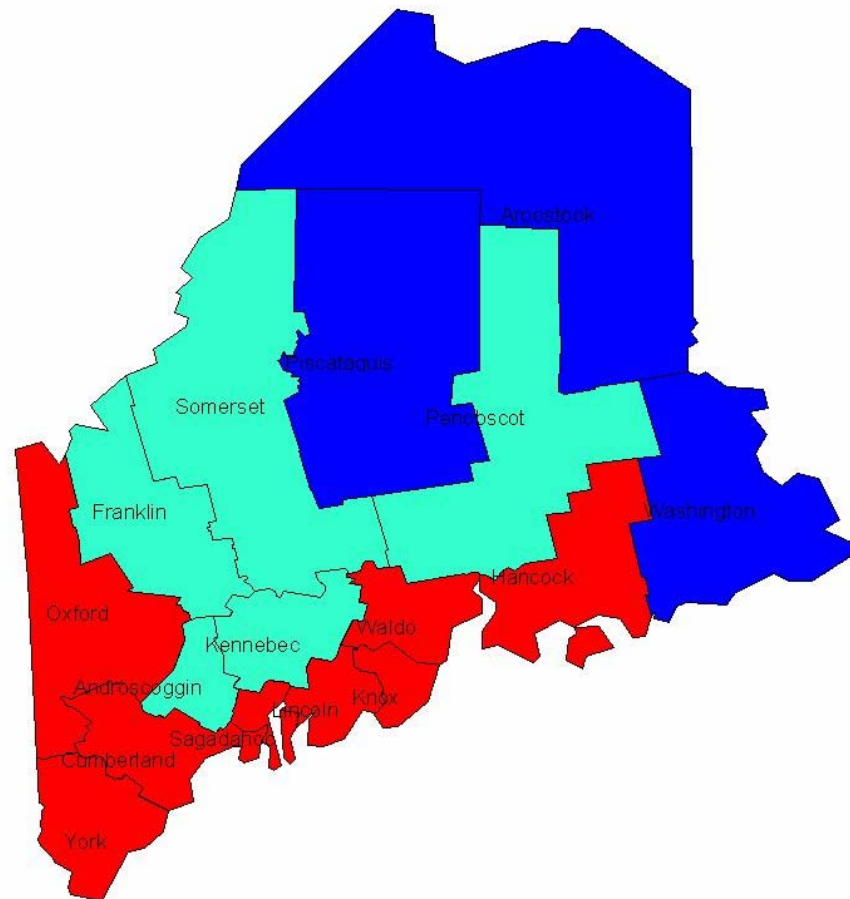
Percent Population Change by Age Cohort Maine 1999 to 2025



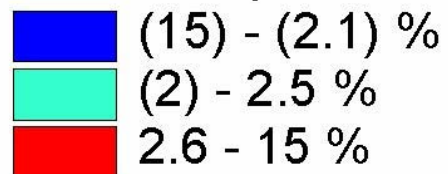


Dependency Ratio, 2000



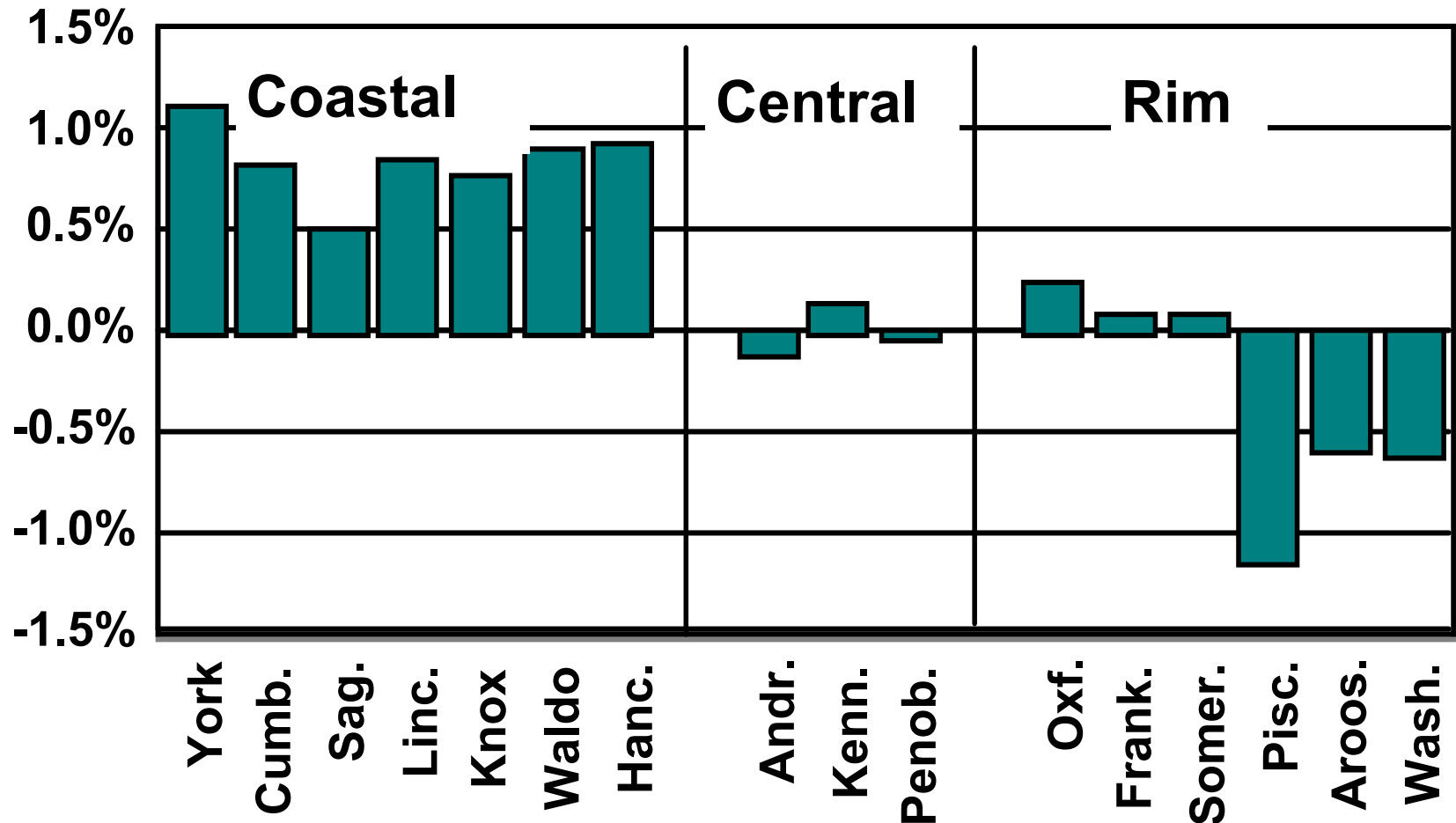


Rate of Population Change 1990 - 2000

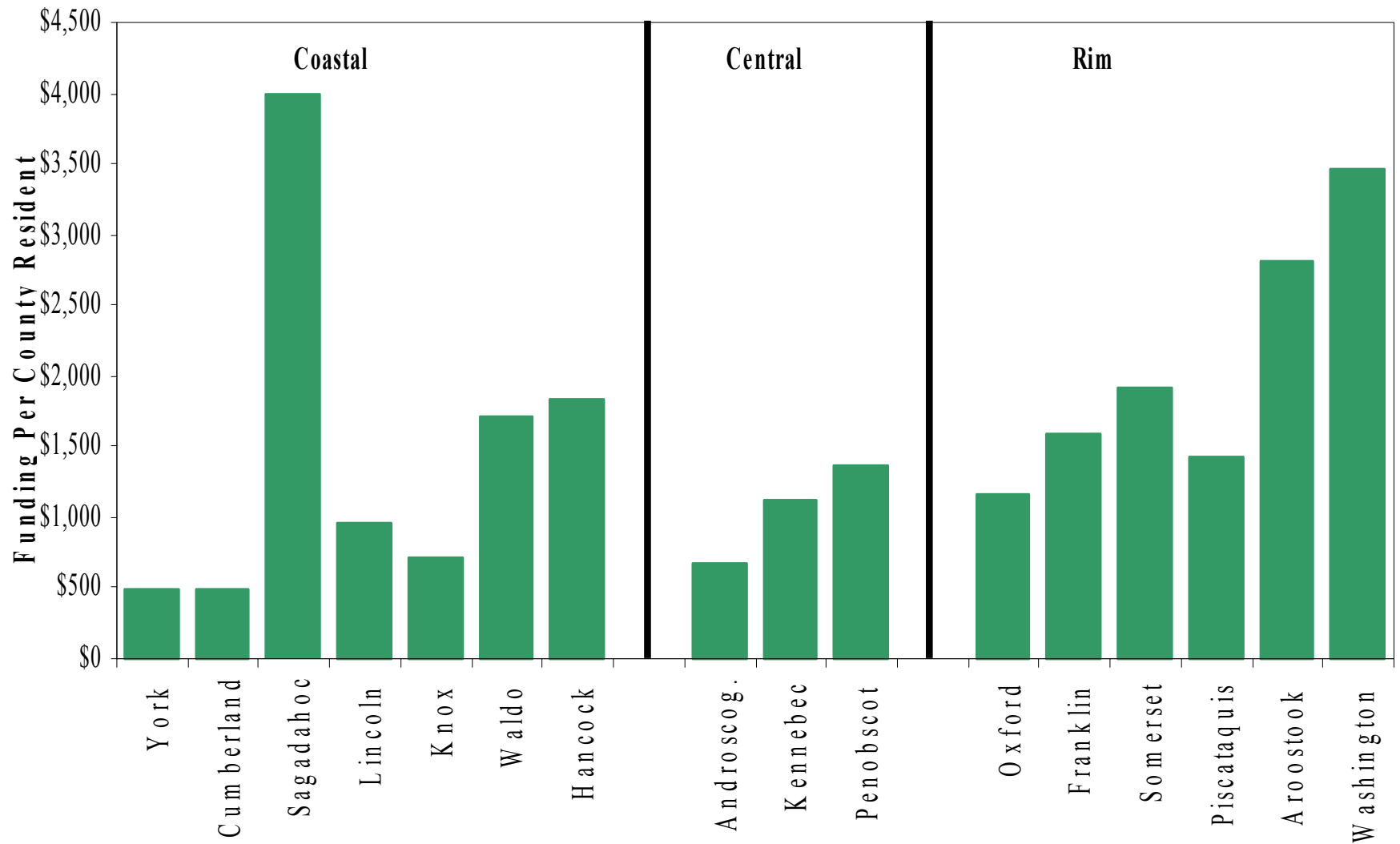


Maine County Population Forecast

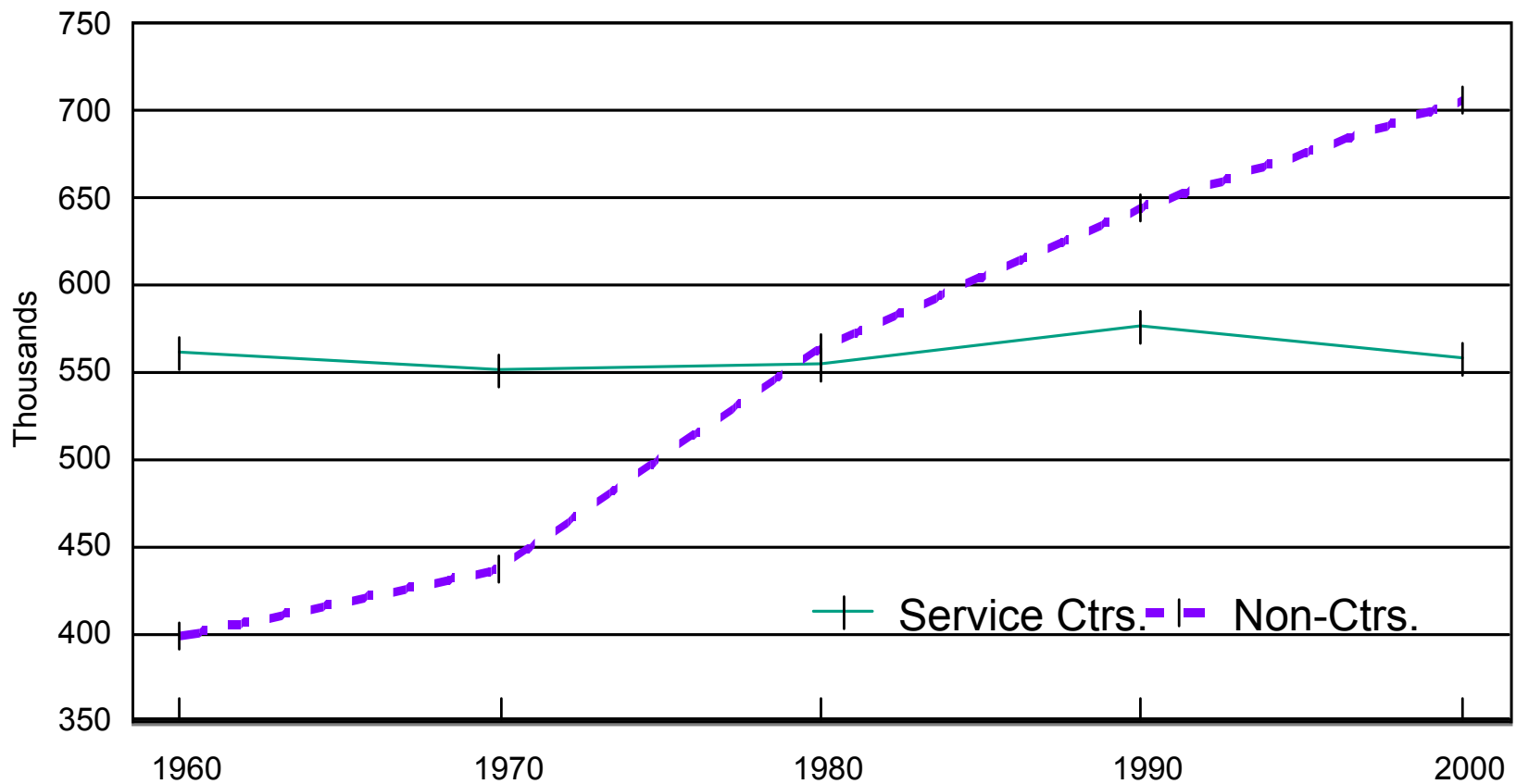
Ann. Avg. Growth 2000-2005



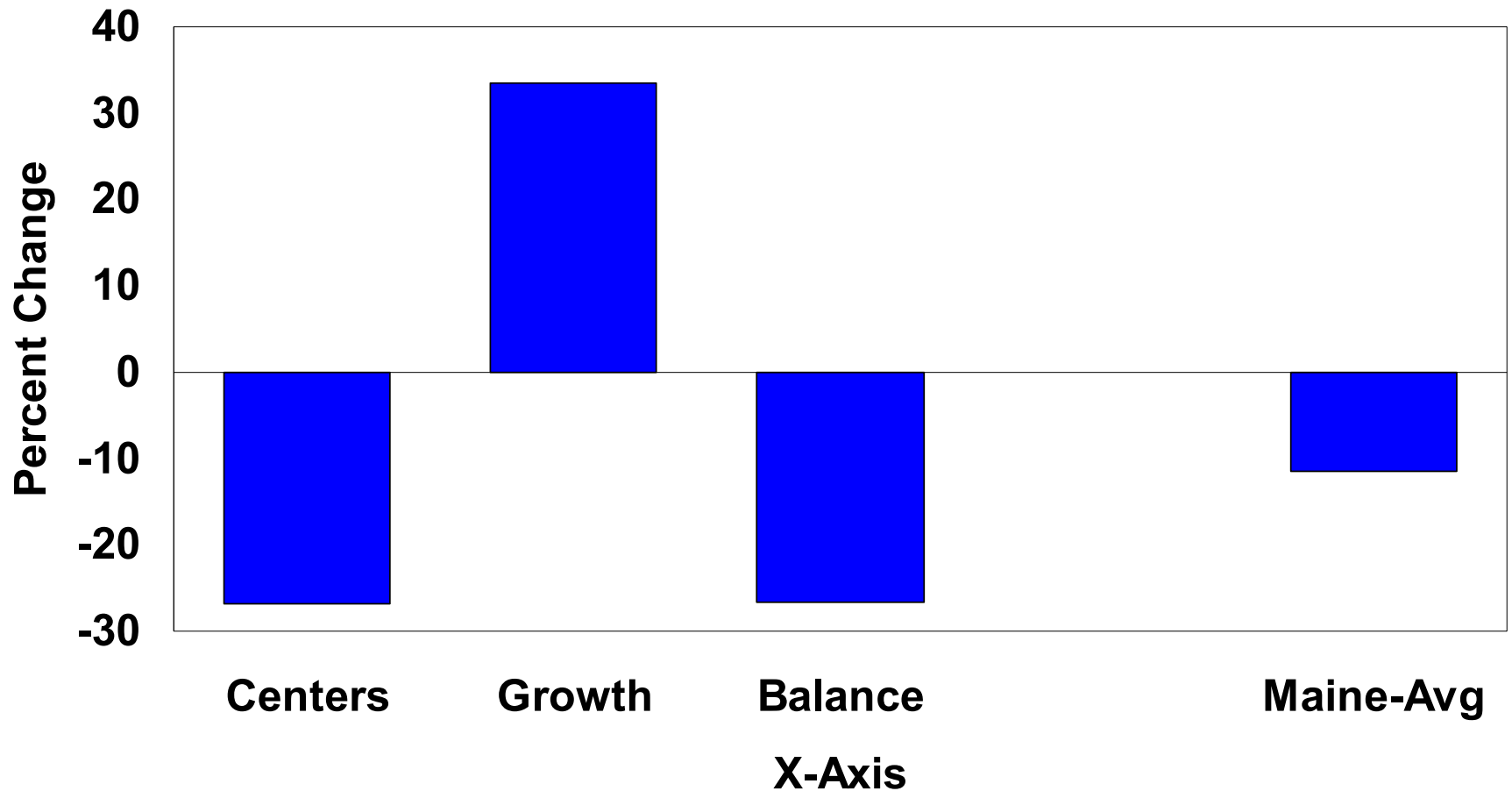
Infrastructure, Community and Economic Development
State Funding Per County Resident: Maine 1997-2002



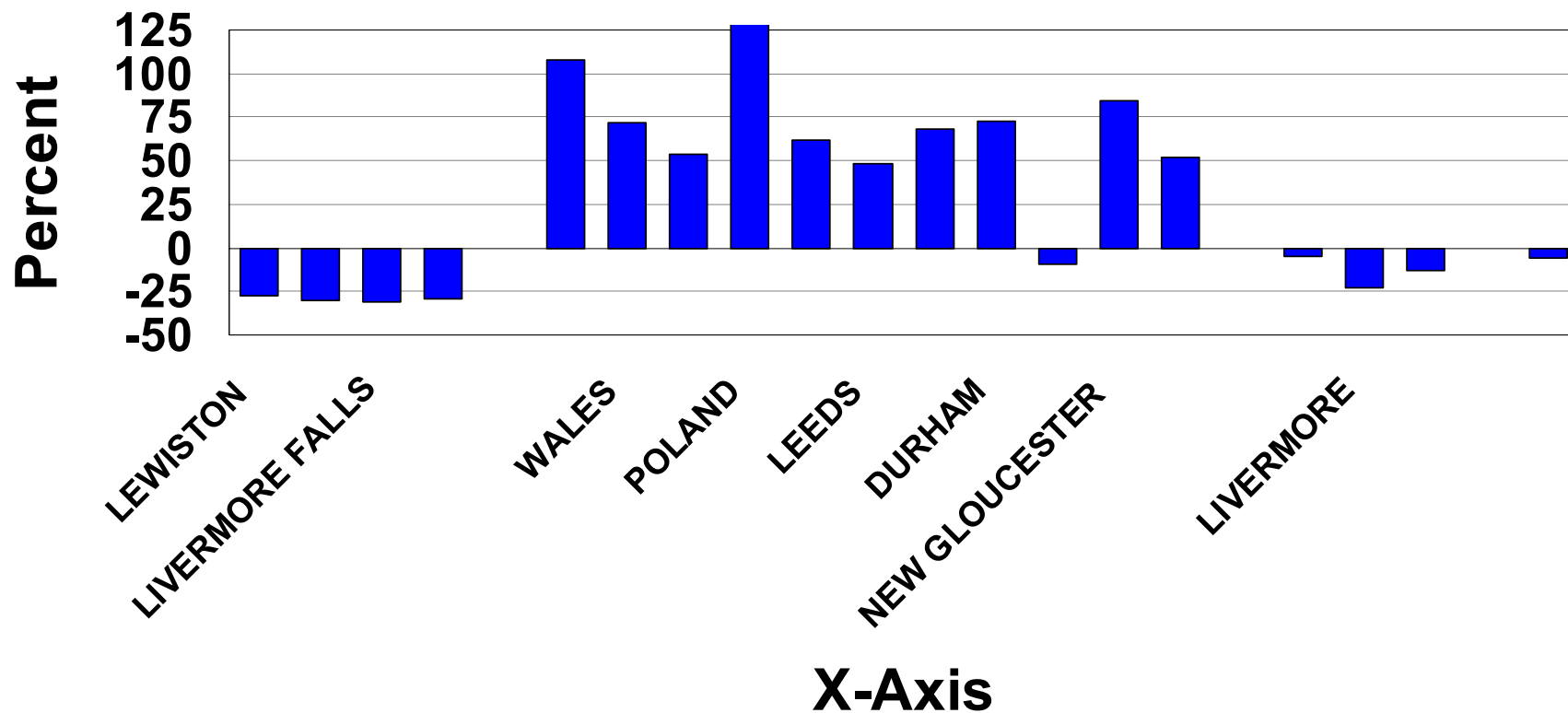
Maine Population; 1960-2000



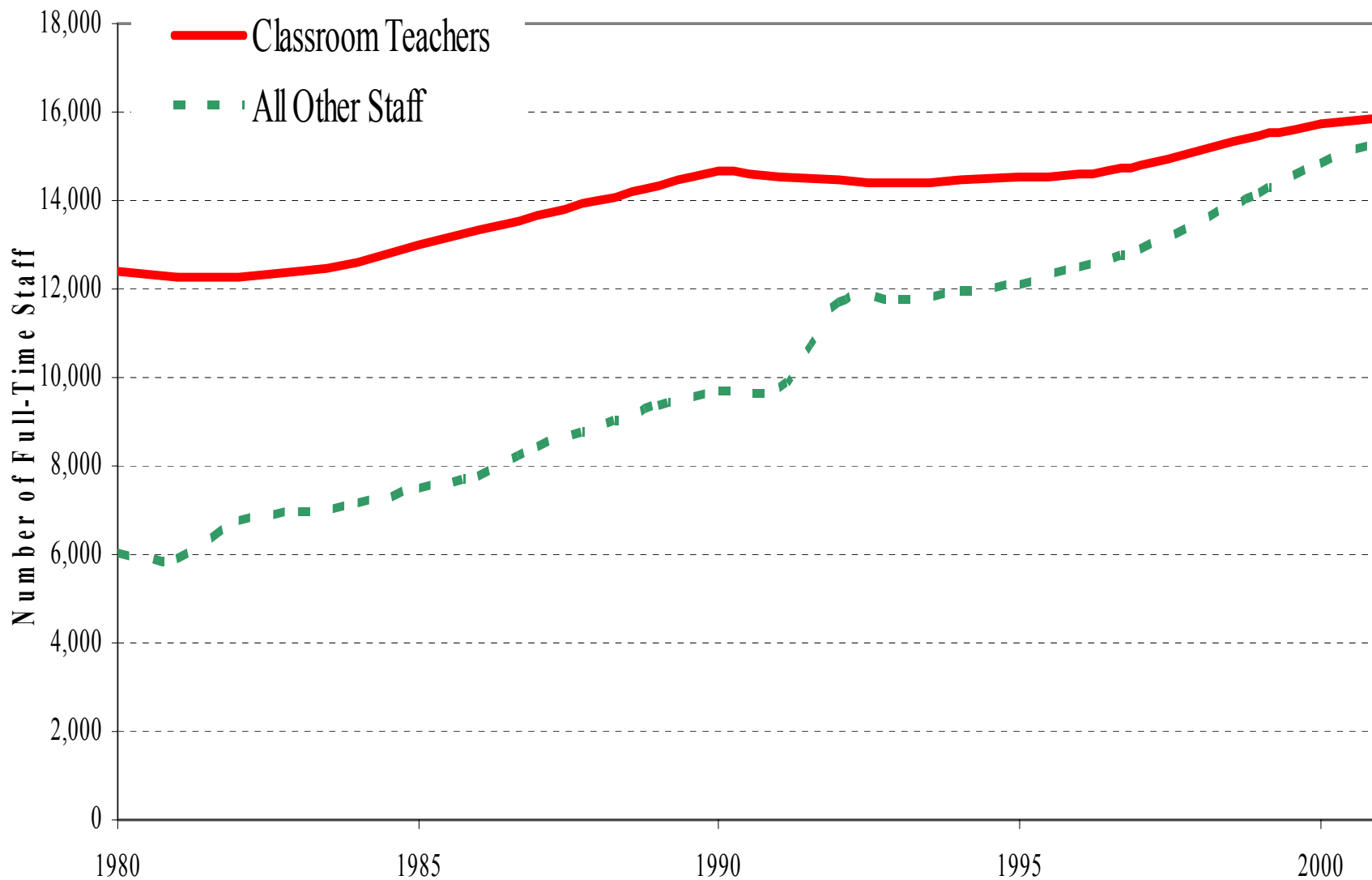
Change in School Enrollment Percent, 1970-1995



Percent Change in School Enrollment 1970-1995



Maine Public School Staff: 1980-81 to 2001-02



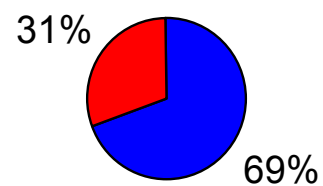
Persons of Color: Maine and US in 2000

ME



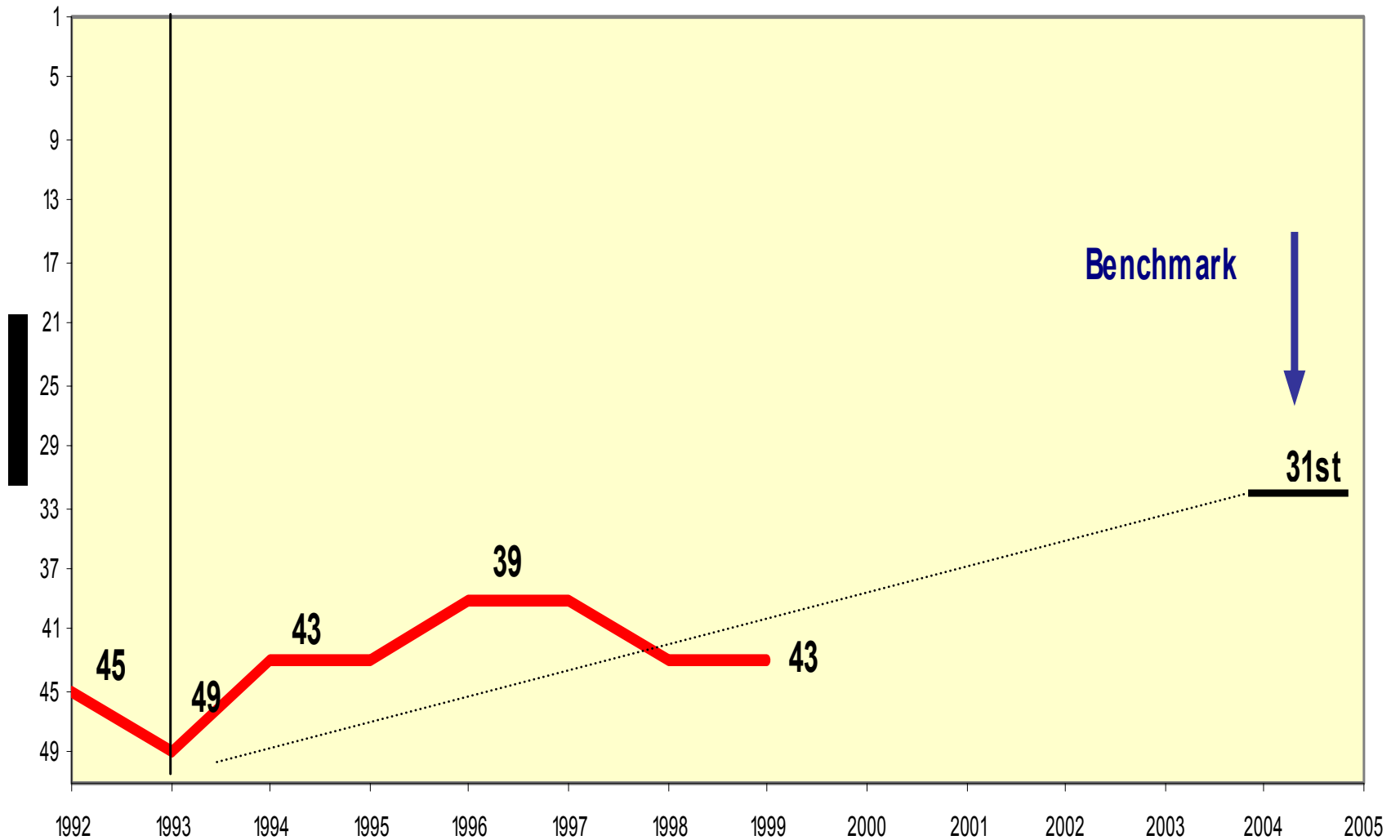
- Majority (White, Non-Latino)
- Minorities

US

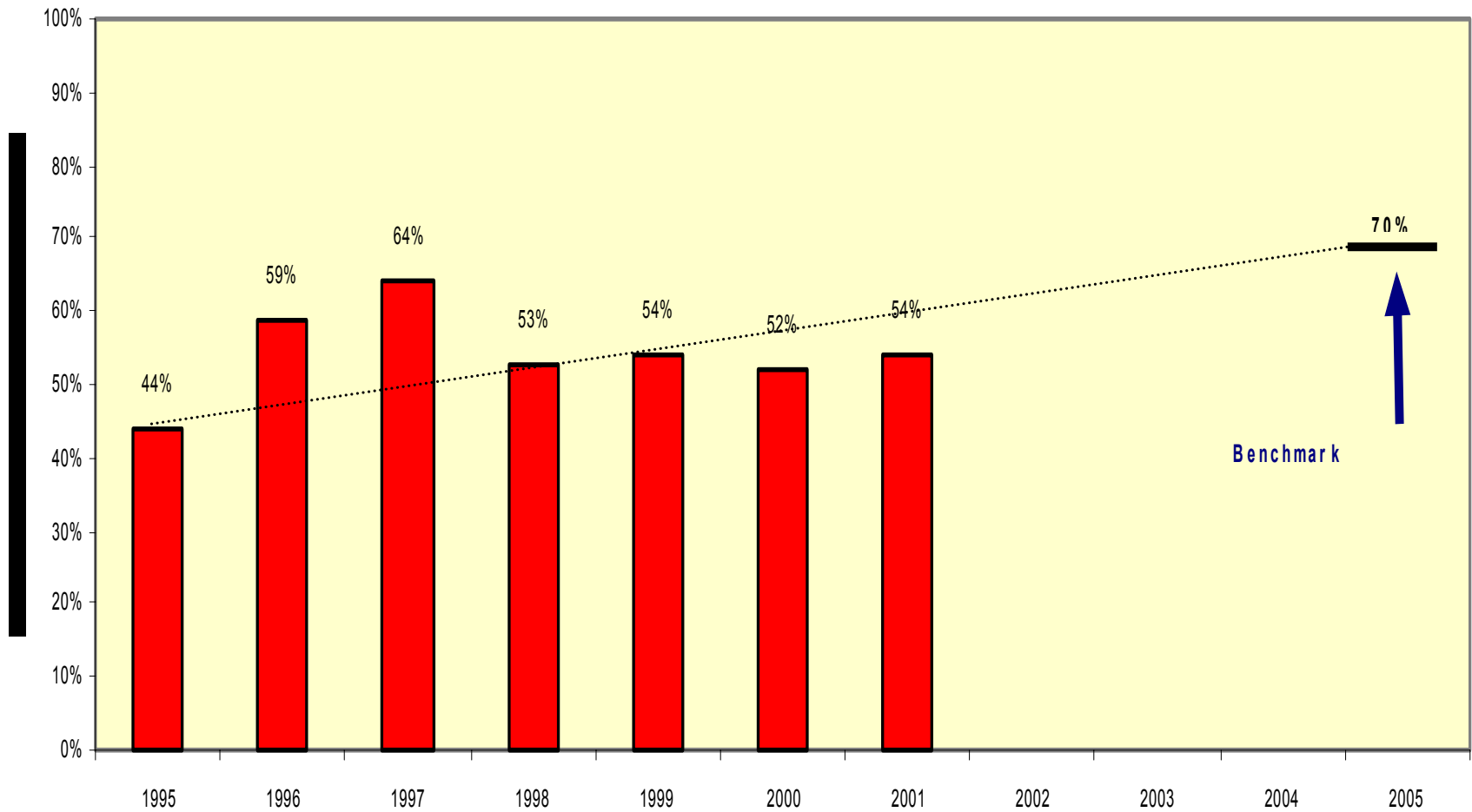


- Majority (White, Non-Latino)
- Minorities

Maine's National Rank on Job Growth Among New Businesses, 1992-1999



Percent of Businesses With New Products or Services, 1995-2001



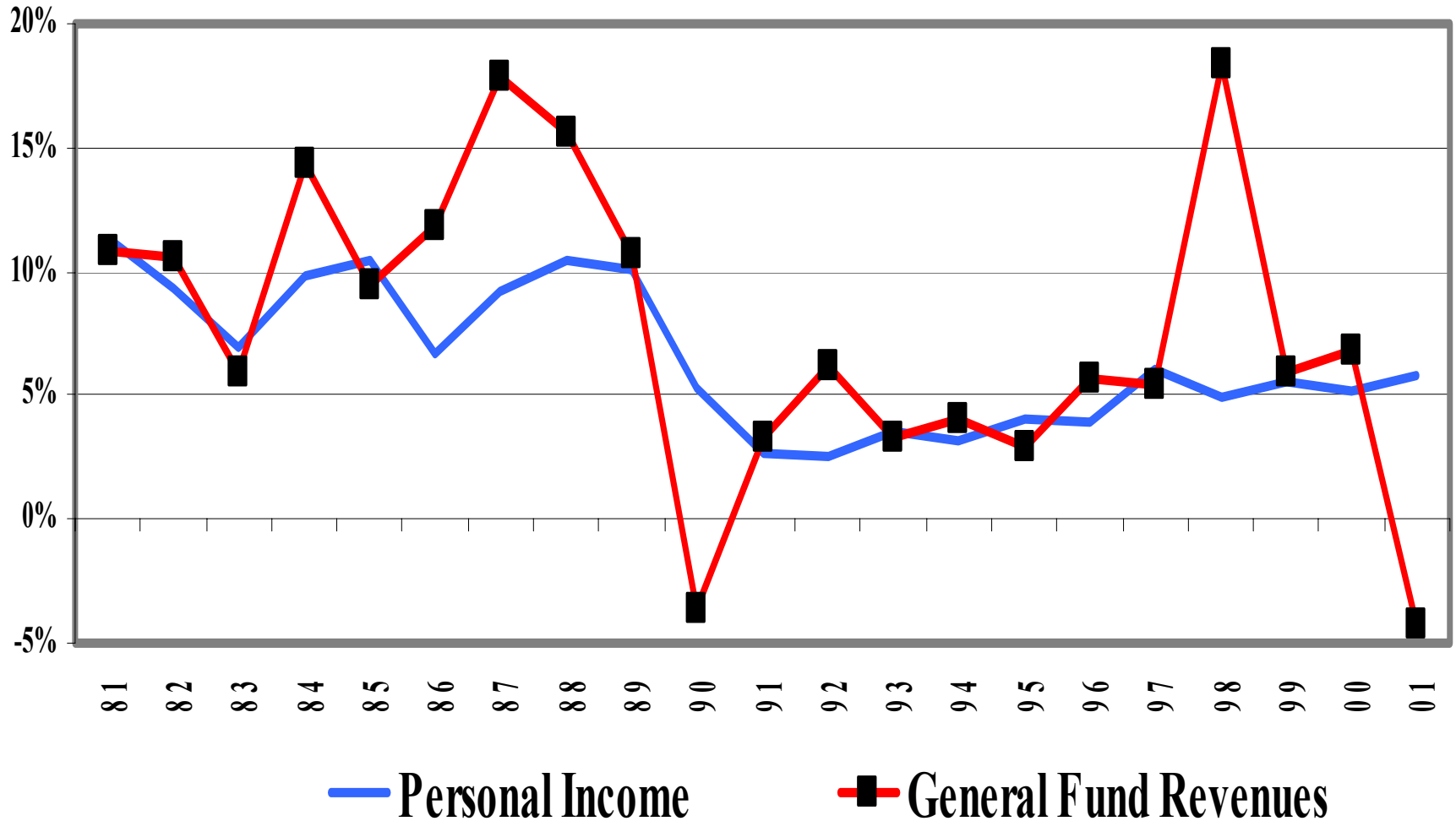
STATE BUDGET SHORTFALL

LOOKS
LIKE
RAIN...

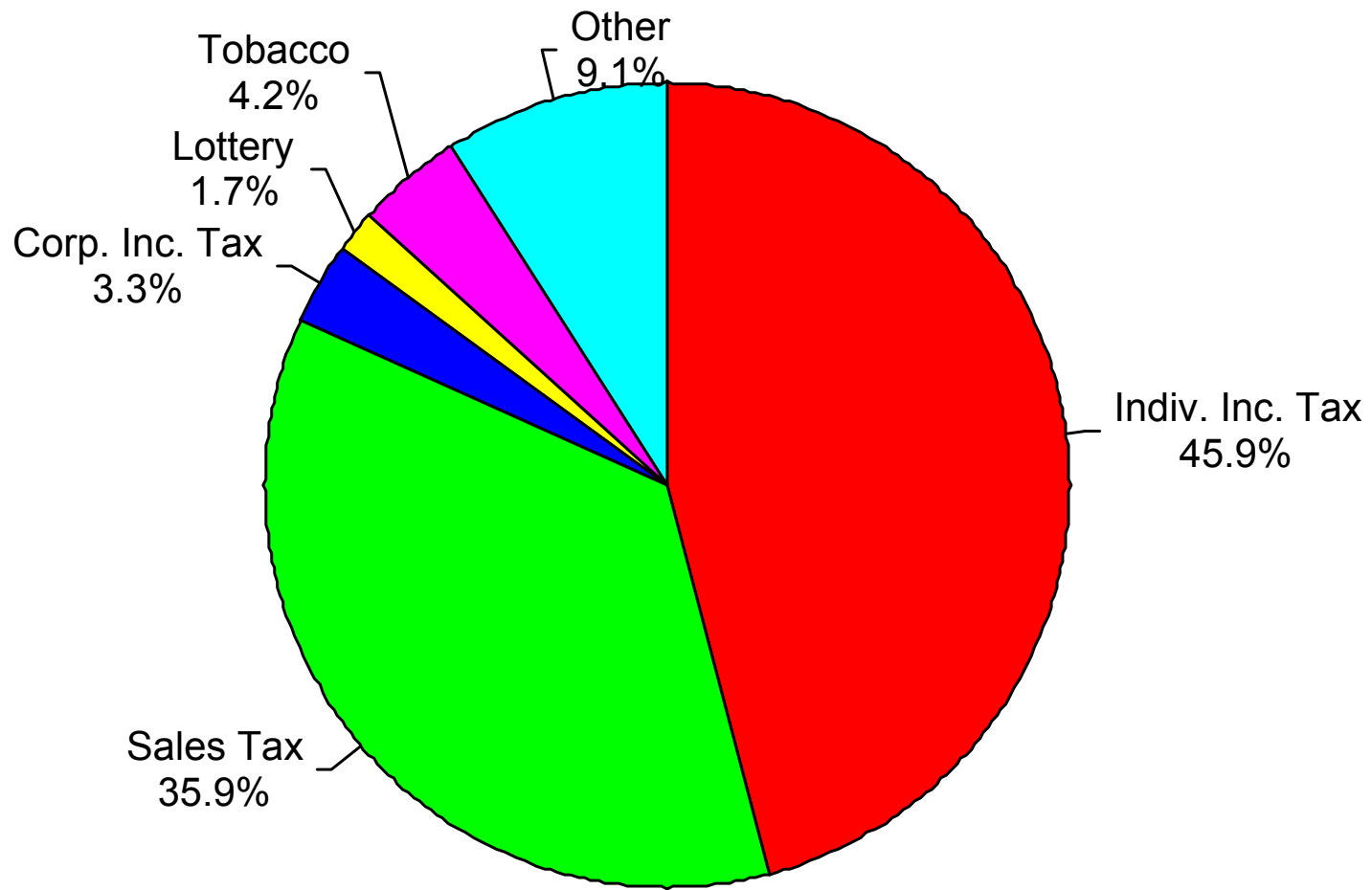
REVENUE FORECASTING

Maine Personal Income & General Fund Revenue

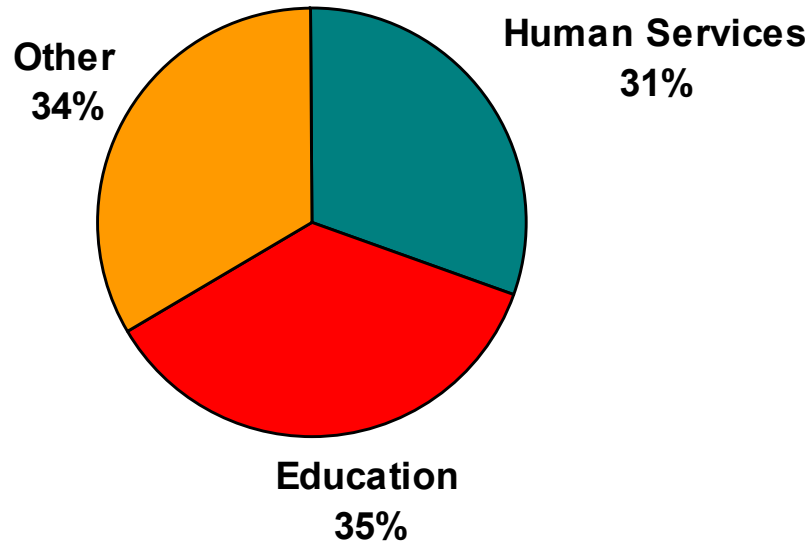
Fiscal Year to Fiscal Year Percent Change



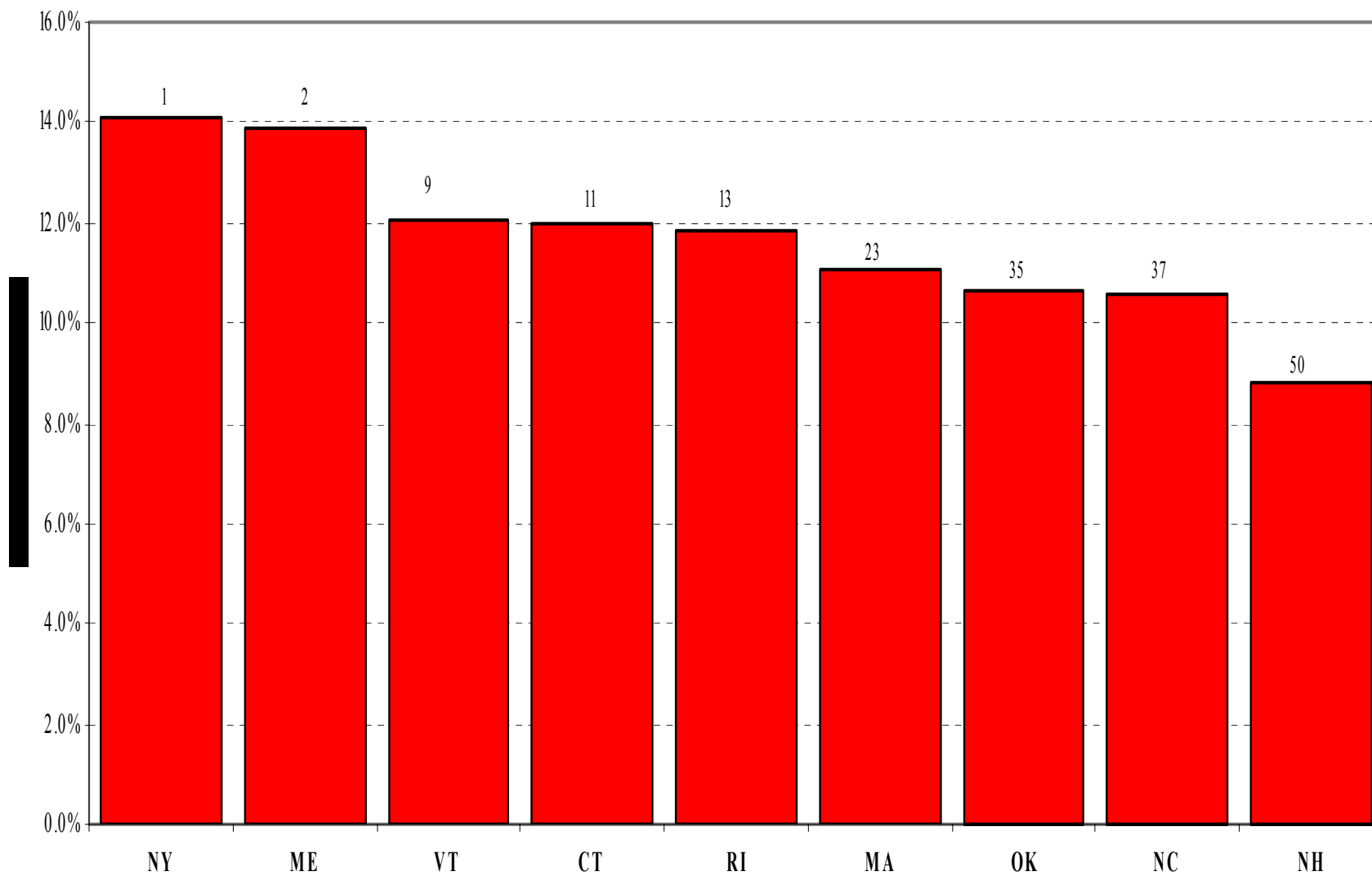
General Fund Revenues FY2002



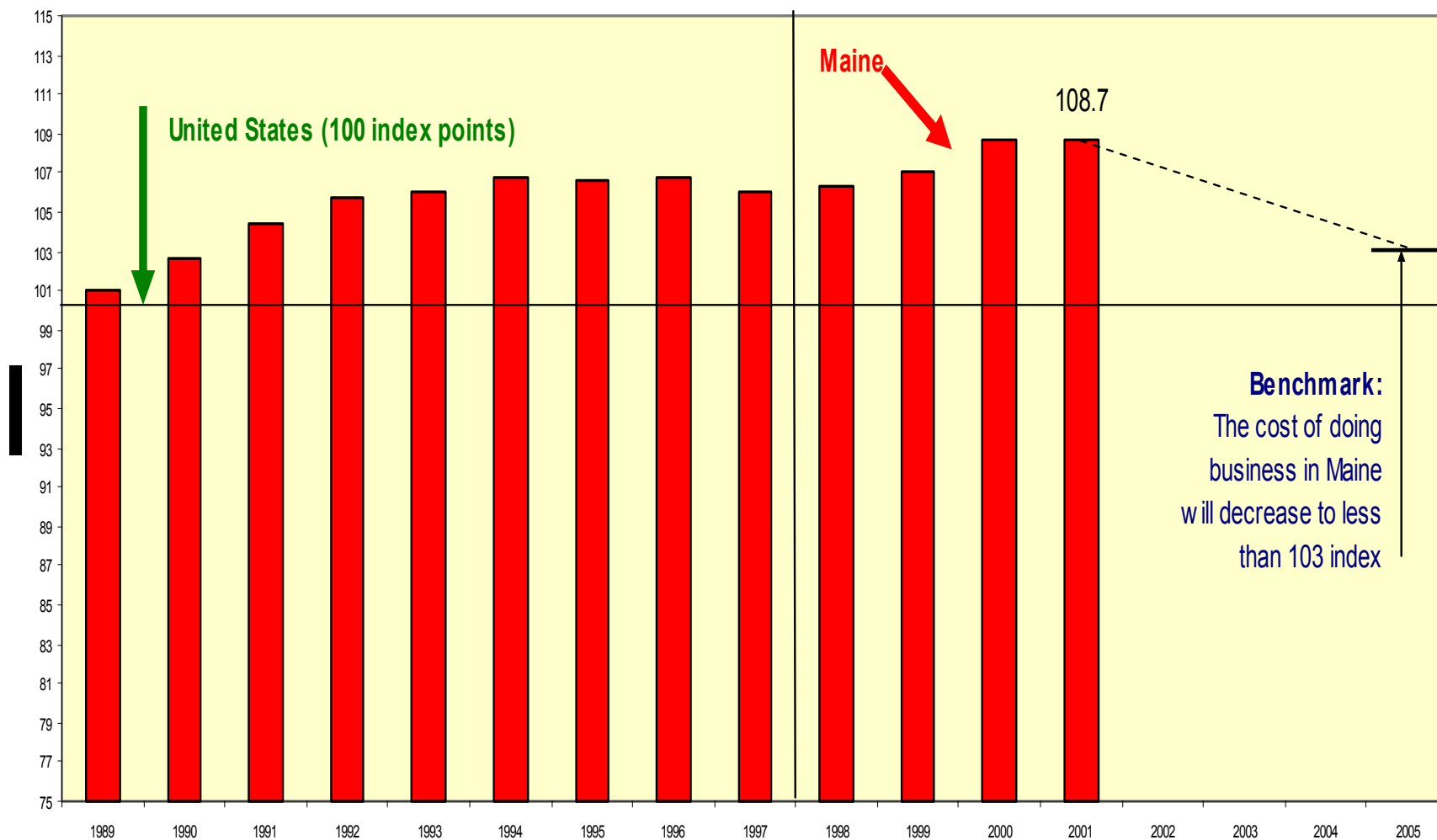
Maine General Fund Expenditures; FY2002



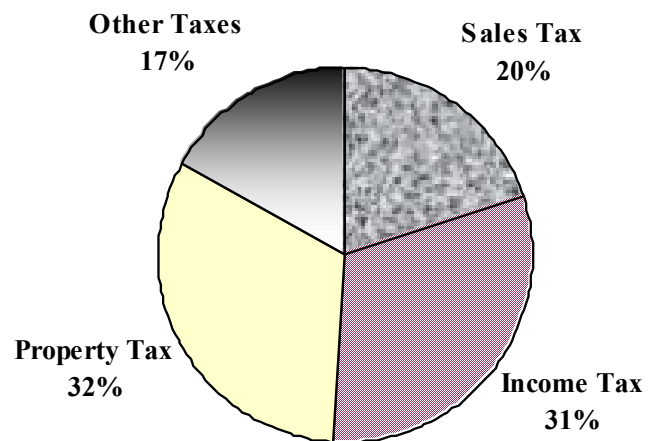
State & Local Taxes as Percent of Personal Income in Fiscal 2000



Cost of Doing Business, Maine and United States, 1989-2001



Maine's 2001 Tax Mix



Maine State & Municipal Real Expenditures Index (1990=100)

